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ABSTRACT

This publication reports the activities of an institute for in-service training of professional persons responsible for vocational technical education in eastern metrololitan areas. Three related problem areas were seen as reasons for the development and focus of this institute. These included: (1) lack of guidance counselor involvement in the placement of vocationally oriented students; (2) lack of counselor interest and expertise in working with the hard-core unemployed in a school setting; and (3) the need to develop new and innovative models for in-service training of counselors in both of the above areas. The objectives of the institute were to acquaint guidance personnel with: (1) the requirements of entry level jobs; (2) the great variety of job skills provided by vocational programs; (3) the necessity for being conversant with the real needs of modern industry, business and agriculture; and (4) the need to build in youth a respect for jobs not requiring a college education. The institute participants were provided with the opportunity to: (1) hear experts in the fields of placement; (2) visit the Technical High School in Syracuse, New York, to talk with students, teachers and administrators; and (3) spend time in workshops devoted to discussing vocational counseling models. (Author/RK)

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FINAL REPORT

INSTITUTE NUMBER IX

Project Number 9-0535
Grant Number OEG-0-9-480535-4435(725)

DEVELOPMENT OF VOCATIONAL GUIDANCE AND PLACEMENT PERSONNEL FOR METROPOLITAN AREAS

VOLUME XI

Part of
Short Term Institutes for In-Service Training of Professional Persons Responsible for Vocational-Technical Education in Eastern Metropolitan Areas

Dr. Gordon G. McMahon
State University College at Oswego
Oswego, New York 13126

March 1971

Sponsored and Coordinated by the Division of Vocational Education, College of Education, Temple University
Philadelphia, Pennsylvania

U. S. Department of
Health, Education and Welfare

Office of Education
National Center for Educational Research and Development

CG 006 703

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Director of Institutes: Dr. C. Thomas Olivo
Co-Director of Institutes: Dr. Albert Jochen

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HEALTH, EDUCATION AND WELFARE

Office of Education
National Center for Educational Research and Development

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FOREWORD

Institute IX was conducted during the week of the strife at Kent State University when campuses throughout America were experiencing the effects of student reactions. It was fortunate that this institute had been planned as an off-campus activity. The particular motel where Institute IX was held was close to the Hancock Airport of Syracuse and very much removed from the typical campus setting. This made it possible for those of us who were in charge to proceed with the institute to its completion. The news media and the visits of various institute members to nearby Syracuse University campus did have telling effects, however, upon an institute that had been planned with objectives quite different from that of studying college student reaction to U.S. involvement in Cambodia.

The group that attended Institute IX was, for the most part, composed of capable guidance personnel from many of the largest cities in Eastern United States. They were not in most cases the top decision makers from pupil personnel services of their respective cities but rather those individuals who operated at the working level of their school systems.

It was our opinion, and this has been verified by our research instruments, that Institute IX did bring about a change in the basic attitude of its participants toward vocational education and particularly toward their need for involvement in the placement of vocational graduates.

We are very grateful for the leadership given by Drs. C. Thomas Olivo and Albert Jochen, the co-directors of the Multiple Institutes. We also appreciate the assistance received from Mr. Jack Wilson of the United States Office of Education.

SUMMARY

GRANT NUMBER: OEG-0-9-480535-4435(725)

TITLE: Institute IX, Development of Vocational Guidance and Placement Personnel for Metropolitan Areas - one of ten short term institutes for In-Service Training of Professional Personnel Responsible for Vocational-Technical Education in Eastern Metropolitan Areas of the United States.

INSTITUTE DIRECTOR: Dr. Gordon G. McMahon, Chairman
Dept. of Vocational Technical Education

INSTITUTION: State University of New York
College at Oswego

DIRECTOR OF MULTIPLE INSTITUTES: Dr. C. Thomas Olivo, Professor
Division of Vocational Education,
College of Education, Temple University, Philadelphia, Pennsylvania

CO-DIRECTOR: Dr. Albert Jochen, Visiting Professor
Division of Vocational Education
College of Education, Temple University, Philadelphia, Pennsylvania

SPONSORING INSTITUTION: Temple University
Philadelphia, Pennsylvania 19122

TIME PERIOD OF INSTITUTE: May 4 - May 8, 1970

Problem, Purposes, and Objectives

Placement of the vocationally oriented and trained student is a concern which in the recent past has not received enough thought or attention by school personnel, including counselors. All too often students have been left to flounder on their own after graduation when they are faced with the all important task of securing a paying job. Counselors, whether because of lack of interest or lack of knowledge, appear to have done little to help students and graduates locate positions which are appropriate to their training.

It was the purpose of Institute IX to explore and develop a variety of in-service training experiences which might enhance the effectiveness of the counselor as he works with vocationally oriented students. Further, problems of placement were considered as an essential element of the vocational guidance service provided by counselors. The specific objectives of the Institute were to acquaint guidance personnel with:

a) the requirements of entry level jobs
b) the great variety of job skills provided by vocational programs
c) the necessity for being conversant with the real needs of modern industry, business and agriculture
d) the tremendous need to build in youth a respect for jobs which contribute to our economic and social well being and which do not require a college education

In addition, the problems of the hard-core unemployed, out of school youth and adults who frequently lack both the necessary skills and attitudes for employability were discussed as they relate to both vocational education and guidance programs.

Procedures and Activities

The institute was developed under the direction of Dr. Gordon G. McMahon, Chairman of the Vocational Technical Education Department at the State University College of New York at Oswego. Dr. Frances S. Koenigsberg of the School Psychology and Counseling Programs served as co-director of the institute and was primarily responsible for the work of the discussion groups.

The institute program had two major phases and a number of ancillary facets. Presentations by invited speakers provided the substance of the program. Discussion sessions which were held twice daily constituted the second major element of the program. Each participant was assigned to one of four groups for the purpose of (a) reacting to the formal presentations made by the invited speakers, and (b) to prepare a working paper on the topic assigned to the particular group. The topics were: (1) Job Placement, innovations and suggestions for in-service training of counselors; (2) the Specialty Oriented Student; (3) follow-thru work adjustment for the hard-core unemployed, and the development of counseling and guidance models for working with this special group; and (4) counseling the disadvantaged student, which focused upon new media and in-service training for counselors who work with disadvantaged pupils. Resource personnel were available to each discussion group upon request. Both institute participants and college personnel served in this capacity, presenting mini-programs or panel discussions.

Another aspect of the program was the use of a questionnaire which each participant was asked to complete prior to coming to the institute. This instrument was focused upon employer and employee attitudes toward vocational preparation and placement and was designed to involve institute participants in a very brief

follow up experience. The results of the questionnaire were analyzed by Wilbur and Mustico and discussed at one of the last sessions of the institute. It should be noted that not all institute members participated in this phase of the activity. Data was gathered at the initial and final sessions by means of a questionnaire to evaluate the immediate impact of the institute upon participants. Questions were designed to study changes in attitudes toward working with disadvantaged youth in a variety of counseling and guidance situations such as placement, follow-thru counseling and the development of media for the vocationally oriented pupil.

Conclusions and Recommendations

At present, it is impossible to assess the long term impact of the short-term institute, however, the following conclusions seem justified:

1) Institute participants were exposed to a variety of new developments and innovations in the field of counseling and guidance with emphasis upon models for in-service training of counselors, placement methodology, development of media and materials for disadvantaged youth and programs for the technically oriented pupil.

2) Institute participants were provided with the opportunity and format to exchange ideas and innovations now in effect in a variety of settings which might prove useful in their own school districts in working with the vocational student.

3) Participants were given the opportunity to take part, on a limited basis, in a follow-up study of vocational pupils, an experience which may serve as a model for more effective evaluation of programs now being carried on in their home districts.

4) From the follow-up instruments which were received, it is apparent that one significant change which has occured is that some of the participants are now involved in placement and follow-up of vocational graduates - whereas they had previously taken the attitude that they should not be involved.

Recommendations from Institute IX fall into two categories. One part consists of specific recommendations generated by the discussion groups for program innovations. These are presented in the final reports of each group and included in another section of the report. The second type of recommendation comes from the experience of those persons who were responsible for the planning and organization of the institute. Specifically we recommend that short-term institutes of this nature be held immediately prior to or after a major national convention such as American Personnel and Guidance Association, or American Vocational Association. School administrators and counselors must limit the amount of time they are absent from their jobs and we felt that in many instances we did not have as participants those administrators we would have liked due to the closeness of our dates to other professional meetings.

I. INTRODUCTION

The Problem

Three related problem areas were seen as reasons for the development and focus of Institute IX. These were lack of guidance counselor involvement in the placement of vocationally oriented students, lack of counselor interest and expertise in working with the hard-core unemployed in a school setting, and the need to develop new and innovative models for in-service training of counselors in both of the above areas.

It was felt that several problems underlie the secondary school counselor's failure to be involved in placement activities. Among these the lack of recent information about local job opportunities for all students seemed very important. All too often, counselors appeared to have relied on out of date information and materials which may not be related to the local job market. Counselors frequently have only limited knowledge of the vocational opportunities available to their students both at the secondary and post-secondary school level. Further it often seems counselors yield to the expressed pressures of the school and community "to get students into college" and may neglect the non-college bound student because they lack the information to really serve this equally important segment of the school population.

An area which is clearly related to placement is counselor efforts to work with the hard-core unemployed and ghetto youth of this country. Students who lack role models, parents, relatives, friends, who are employed on a regular basis have great difficulty acquiring the necessary attitudes which lead to employability. Job training in a skill area is all but wasted unless the student also learns about employer expectations relative to promptness, attitudes toward work and other aspects of the job. If school counselors are to be of help to the hard-core unemployed, new ways of working with these students and recent dropouts must be evolved.

Because counselors, and other pupil personnel specialists, have had difficulty in meeting the needs of the non-college bound school population and students who come from a background characterized by unemployment, there is a need to develop new and efficient ways to up-date their information giving and counseling skills through in-service training. At present few models have been developed to provide such experiences, although some efforts notably those proposed by the city school administrations of Columbus, Ohio and of Atlanta, Georgia have received some notice. It was hoped that Institute IX would generate additional models for in-service training with particular emphasis on the placement of the vocationally oriented student.

Objectives

The objectives of Institute iX were developed from a consideration of the problem areas. They were to acquaint guidance personnel with:

1) "the requirements of entry level jobs;" including a consideration of the contributions of vocational education, method of increasing guidance counselor involvement in placement and follow-through work adjustment counseling, and knowledge of opportunities for technical training at the post secondary school level.

2) "the great variety of job skills provided by vocational programs;" including the opportunity for Institute participants to learn about and discuss vocational education programs now in effect and some of the ways counselors might become more involved in program developments so that these programs might better serve both students and the community.

3) "the necessity for being conversant with the real needs of modern industry, business and agriculture;" including methods and suggested procedures for gathering, editing, and distributing up-to-date local information about job requirements and opportunities, suggestions for involving representatives of local business and industry in the vocational education and guidance programs, and practical ways to evolve effective placement activities.

4) "the tremendous need to build in youth a respect for jobs which contribute to our economic and social well-being and which do not require a college education;" that is, to develop suggested ways to focus attention upon those jobs which now exist, and upon those which may develop in our technological culture, which demand skills and technical expertise but not a college degree, and to attempt to change attitudes held by many personnel in our schools which tend to down grade vocational education at that level.

Outcomes

The planners of this institute hope that the experiences may serve to provide participants with a better understanding of the world of work for the several personnel chosen from metropolitan school systems of Eastern United States. Another desired outcome was that participants through the opportunity to hear experts in the fields of placement, counseling and vocational education might be stimulated to design and try out a variety of new approaches to working with non-college bound students, including in-service training programs for counselors in their own school systems. Expanded knowledge of the world of work, the needs of business, industry and agriculture, and the opportunities for vocational education for students should provide counselors with some of the necessary conditions to be more effective in their work in a school setting.

General Plan of Operation

The plan of operation for Institute IX as it developed had four inter-related phases. A more complete description is included in the next chapter of this report.

Phase one: Each participant was asked to gather follow-up data for former vocational students and their employers. This data was collected before coming to the Institute and was analyzed and available for study during the sessions. Participants were asked to contact at least five former students, and the majority of the participants did so.

Phase two: Each participant was assigned to one of four task force groups. The purpose of the groups was two-fold; to discuss and raise questions about the presentations made by consultants, and to evolve a working paper focused upon an assigned topic. The topics were: Placement, what is the counselor's role?, the Specialty - Oriented - Student, Counselor involvement with the Hard-core Unemployed, and the Development of Role Models for the Culturally Disadvantaged.

Phase three: Seven institute sessions were devoted to the presentations by consultants, invited speakers and panels. Each session focused upon a specific area being considered within the Institute, in either an information or reporting fashion.

Phase four: During the Institute time was available for special events. Three such occasions occured. One was an extensive tour of the Technical High School in the City of Syracuse including the opportunity to visit classes and shops and to meet with teachers and administrators. The other two occasions were of a social nature; one, a reception for the institute participants and staff and the other a banquet.

II. METHODS AND PROCEDURES

Nomination and Selection of Participants

Participants for Institute IX represented a wide segment of the Eastern Metropolitan School District in the United States, as well as representatives of area vocational schools and State Education Departments. A total of 58 participants were selected and attended the Institute. Positions held by participants in their districts ranged from Assistant Superintendent for Pupil Personnel Services to counselor, and included directors of guidance, counselor educators, counselors in post-secondary technical schools, State Vocational Supervisors, and directors of special programs for disadvantaged youth operated by large school districts. Specific information about each participant is included in the appendix.

The process of selecting and nominating institute participants was enhanced by the cooperation of the coordinating office which provided the director with contacts in several metropolitan areas such as Atlanta, Baltimore and Washington, D.C. In a number of instances, the director made contact with the city superintendent directly to secure the nomination of participants. In all instances the director urged that the participant be someone who was in a decision making position. From an examination of the final list of participants, it is obvious that it was not possible in all instances to select only people who functioned at this level for the Institute. In general applicants were selected to attend the institute on the basis of availability at the time the Institute was held.

In addition to a complete list of all participants, copies of the several announcements sent by the director to school superintendents to solicit nominations for the Institute have been appended to this report. Response to these letters was quite good, although not enough people were nominated to hold two sessions of the Institute as originally planned, and several large school systems were not represented, notably New York City and Chicago, Illinois.

Planning the Institute

The Director had the major responsibility for planning the Institute, including the selection of consultants, speakers and other members of the staff. Early planning sessions were attended by the Director, Dr. Charles, Weaver, Dr. Kenneth Hoyt, Dr. Norman Gysbers, and Dr. Gene Bottoms and focused on the objectives and content of the Institute. During this phase of planning for the Institute, the Coordinating office of Temple University provided support and consultation as the general outline of the Institute took form. The Planning and Implementation Meetings held in Philadelphia provided a forum for the various Institute directors to discuss mutual problems of recruitment of participants and resource personnel and to focus upon procedures developed by the coordinating office for administration of the Institutes. United States Office of Education personnel were also available to lend additional guidance and direction.

The second stage of planning for the Institute took place at the local level. A number of faculty members of the College at Oswego served as consultants with specific responsibilities. Dr. Frances S. Koenigsberg was asked to develop the charge for each task force group and to select a variety of materials to be available for participants during the Institute. She was also involved in the planning of the schedule for each day of the Institute and the selection of participants. During the Institute, she served as co-director. The director working with a member of his staff, Mr. Nicholas Acquaviva, developed a questionnaire which was used to gather the follow-up data brought to the Institute by participants. Drs. Thomas Mustico and Paul Wilbur were responsible for the statistical analysis of these data. Mr. Burton Thelander of the New York State Education Department consulted with the director on the overall planning of the Institute with particular attention to how his office might be of assistance. Members of the Vocational Technical Education faculty assisted with many of the details related to physical arrangements which attend planning for an Institute. Throughout this phase of planning, the coordinating office was kept informed of the progress being made at Oswego.

Role of Consultants and Resource Personnel

The role of the various consultants and resource personnel in the planning phase of the Institute has been covered in the preceding section of this chapter. All final arrangements were the responsibility of the director.

During the Institute the consultants and resource personnel continued to function actively, serving as speakers, resource personnel for discussion groups, group leaders and panel members. The director and/or the co-director was present at all Institute sessions and served as facilitators for the entire Institute. They were responsible for the day to day program as well as the general progress of the Institute including physical arrangements and special events.

A number of consultants served as speakers during the Institute providing specific content to the Institute. In all instances the consultants also met with the discussion groups and responded to questions and reactions posed by participants as part of their contribution to the Institute. Specific information about this aspect of the Institute is included in the next section.

Resource personnel functioned primarily with the discussion groups providing both leadership and content when needed. In a number of instances their contributions appear to have shaped the reports submitted by the groups through the addition of their expertise.

Members of the Oswego faculty involved with the Institute were used to moderate several panels and to provide assistance to the directors in making the arrangements which are necessary for the smooth functioning of any program.

Conducting the Institute

The Institute was held at the Gotham Motor Inn, located on the outskirts of Syracuse, New York. The Motor Inn provided all the necessary facilities for the Institute including meeting rooms, office space, and living accommodations for the participants, consultants and staff. The decision to hold the Institute in Syracuse rather than Oswego was made because of ease of accessibility to the airport.

A copy of the daily schedule can be found in the appendix to this report and includes a listing of all events, presentations and group meetings which took place during the Institute. A few additional comments should serve to provide the readers with a picture of the Institute in action and to show how the organization of the Institute was designed to meet the stated objectives.

Five Institute sessions were devoted to the presentation of formal papers. In all instances the speakers addressed themselves to one of the specific content areas thought to be relevant to the Institute. These presentations were:

"Training Counselors for the Seventies"
Dr. Leon LoMonica, Assistant Professor of Education
Brooklyn College, City University
of New York
Brooklyn, New York

"Job Placement - A Necessary Function in Career Development"
Dr. Gene Bottoms, Associate State Director
Division of Vocational Education
Georgia Department of Education
Atlanta, Georgia

"Follow-through Work Adjustment for the Disadvantaged"
Dr. Norman Gysbers, Professor of Education
University of Missouri
Columbia, Missouri

"The Specialty-Oriented Student"
Dr. David Livers, Professor Counselor Education
Northern Illinois State College
DeKalb, Illinois

"Results of Follow-up Questionnaires: The Effectiveness of Vocational Education and Placement"
Dr. Paul Wilbur, Associate Professor of Psychology
State University College at Oswego
Oswego, New York

Abstracts of these formal presentations are included at the end of this chapter, and where possible the formal paper has been included in the appendix to this report.

Following most sessions in which a paper was presented, the task force groups were asked to meet to discuss the material presented and to develop reactions and questions to be put to the speaker during a subsequent meeting of the total group. Each group was to select one member who presented the material developed by his group.

Panel presentations with programmatic content took place on two occasions during the first day of the Institute. The first of these presentations was made by a group of seniors from Syracuse Central Technical High School under the leadership of Mr. Patrick Dempsey, Director of Guidance for the Syracuse school system. The students were asked to discuss the topic of job placement from the student's point of view, and to include in their discussion an appraisal of the counselor's role in this activity. Their presentation was lively and clearly raised some issues about the effectiveness of counselors in job placement and the role of the United States Employment Service in helping students secure employment.

The second content panel session was under the direction of Mr. James Wade, Assistant Superintendent, Columbus, Ohio. This program described the efforts being made in Columbus to develop more effective ways to present occupational information to black students. Mr. Wade assisted by a member of his staff, a student and an employee of industry described in detail how black students are put into contact with employees in a variety of settings so they may gain first hand information about jobs and working conditions. A publication prepared by this group has been included in the appendix and illustrates the spectrum of occupational opportunities available to blacks in Columbus.

Dr. Charles Weaver, State Supervisor of Guidance Services, Ohio State Department of Education, presented a special program at the Institute on the topic of the impact of vocational education. He made use of data gathered in follow-up surveys of graduates of vocational schools in Ohio with particular emphasis on the holding power of these schools and the subsequent employment records of their graduates. His talk was illustrated with a number of colored transparencies and served as an example of a program which might be included in an in-service training program for counselors.

"How Do We Know When Vocational Education is Doing its Job?" was the title of the special presentation made by Dr. Gordon McMahon, Institute Director. This program consisted of a slide presentation of a wide variety of vocational education classes in action and commentary regarding the development of these courses to meet specific local needs. Dr. McMahon stressed in his presentation the role of the counselor in providing information about vocational education opportunities to students and in job placement of graduates. The thrust of this presentation was to high light the inter-relationships of vocational education and guidance activities.

An important element of the institute was the development of the task force groups. Each participant was assigned to one of four such groups which met for six or more sessions during the institute. The task force groups functioned in two ways: one, as a discussion group to consider the formal papers presented by the various consultants, and two, to develop a working paper on an assigned topic. All working papers were to consider models for the in-service training of counselors, and each was to reflect consideration of the assigned topic as substance for in-service training. The general directions given to participants regarding the function of the task force groups and the specific charge to each group is included in the appendix. A copy of the final report of each task force group is also included. The topics considered by the groups were:

1) Job Placement (Blue Group)
2) Follow-through Work Adjustment for the Disadvantaged (Brown Group)
3) The Specialty-Oriented - Student (Gold Group)
4) Development of Work Role Models for the Disadvantaged (Orange Group)

The final institute session was devoted to an oral presentation of the reports of the task force groups which provided all participants with the opportunity to react to the work done during the week. Comments made at that session, along with the working notes developed each day and the final working paper provided the Institute staff with the material to prepare the final reports included in this document.

An additional aspect of Institute IX was the use made of the Follow-up Survey data brought to the Institute by a majority of the participants. Copies of the cover letter and the questionnaire are included in the appendix, along with the statistical analysis of the data. In general those participants who were involved in this part of the Institute found their efforts to be rewarding and interesting. A more complete discussion of the Follow-up Study and results is included in the abstract section of this chapter.

Three special events took place during the Institute. Two were of a social nature, a reception on Sunday, May 3, for participants and staff, and a banquet held on the final evening for the entire Institute. The third special event was a tour of the Central Technical High School in Syracuse. These events do not appear in the daily schedule of the Institute and were arranged during the Institute.

Orientation of Participants

Participants were oriented to the total program of the short-term institutes: Training Professional Personnel Responsible for Vocational Technical Education, Eastern Metropolitan Areas, during the first formal session of the Institute. In his opening remarks, the director focused upon the general objectives of the total project and related these to the more limited objectives of Institute IX. More specifically, an attempt was made to outline for the participants the necessity for

greater involvement, knowledge and understanding by counselors of vocational education students and the contribution that this type of education can make to the entire socity. Dr. Jochen, Assistant Director of the Multiple Institutes from Temple University, was present at this session and was introduced to the Institute at that time.

Abstracts of Presentations

The next portion of this chapter includes abstracts of each major presentation developed by the Institute staff from the formal papers presented. In those instances where no formal paper was delivered, the high lights of the panel or individual presentations have been used as the basis for the abstract. For a complete text of each presentation, where available, see Appendix.

ABSTRACTS OF PRESENTATIONS

THE SPECIALTY-ORIENTED-STUDENT

David Livers * 1

The Specialty-Oriented Student program is designed to help students choose private trade and technical post secondary schools. The major thrust of the program is evaluation of such institutions by counselors and vocational educators. The training institution is evaluated on: quality of program, type and number of students in attendance, work history and job success of graduates, cost, preparation for licenses and placement practices. The reports of the evaluating team are published regionally and made available to counselors in that geographic area. All materials are constantly up-dated by the evaluating group, and efforts are made to increase the number of schools included in the S.O.S. file. The S.O.S. program office in Iowa City offers initial guidance to local groups conducting evaluations and provides forms and technical assistance in preparing the final report.

The speaker urged participants from areas which are not as yet involved in the S.O.S. program to contact the coordinating office with the hope of expanding this service.

(1) No formal paper was delivered by Dr. Livers who was substituting for Dr. Kenneth Hoyt.

* David Livers is Professor of Counselor Education at Northern Illinois State College, DeKalb, Illinois and Co-director of the S.O.S. Program, University of Iowa, Iowa City.

140919

TRAINING COUNSELORS FOR THE SEVENTIES

Leon J. LoMonaco *

Following a review of the more traditional models which have been or are being used to train counselors, a model based upon individual pathology and a model based within the experimental tradition, the speaker proposed that in the future counselor training take place in the real world of people and problems. Responsibility for learning is placed upon the learner, and the supervisor functions to facilitate learning. Five inter-dependent learning centers were proposed: a didactic module; a field practice and internship module; a supervision module; a planned intervention module; and a personal development module. Each module is designed to handle a number of training issues, to provide initial directions as well as learning resources. The training staff is to function in the field with the learner to provide continuing support to his efforts. Attention to issues in human development and the development of interventionist strategies is central to all of the modules, which when accompanied by greater sensitivity to people should provide a model for training counselors for the '70's.

* Leon J. LoMonaco, Ph.D. is Assistant Professor of Education, Brooklyn College of City University of New York, Brooklyn, New York 11210.

FOLLOW THROUGH WORK ADJUSTMENT FOR THE DISADVANTAGED

Norman C. Gysbers *

Programs for groups of disadvantaged persons have included combinations of basic education, skill training and worker role orientation activities. These programs have been based upon a series of assumptions about the general behavior of the disadvantaged. Four of these assumptions are: (1) many disadvantaged have ways of surviving in which work is not a significant factor, (2) fatalistic belief in uncontrollable external forces, orientation to the present and a belief in the material over the intellectual; (3) counselors must attend to the unique ways each individual differs from the norm; and (4) to create an impact on the behavior of people, it is necessary to get them active. Principles for effective program development are: effective follow through activities of work adjustment should begin far in advance of the completion of formalized skill training; training and jobs should overlap; pre-job placement and work adjustment activities on-the-job should be carefully articulated; and companies who hire disadvantaged persons will find it necessary to modify their behavior and policies; and follow-up is an integral part of follow through work adjustment activities.

* Norman C. Gysbers is Professor of Education at the University of Missouri, Columbia, Missouri.

JOB PLACEMENT - - A NECESSARY FUNCTION IN CAREER DEVELOPMENT

Gene Bottoms *

Job placement should be a systematic effort within the total school program. Members of the guidance staff have particular responsibilities for the placement program, as well as helping students choose curriculums which will increase their employability following school leaving. To do this counselors must be aware of local and regional employment opportunities, and have accurate and up-to-date information about business, industrial and agricultural enterprises which employ former students. Such information, whether gathered by the counselor or some centralized agency should provide both pro's and con's to enable the student to evaluate his employment prospects more realistically. This information should be quite specific. Students should also be assisted throughout the process of applying for a job and starting to work. Follow-up of each student placed is advocated to avoid his being trapped in a deadend low paying entry job.

This paper also presents a description of the placement program developed in Georgia for the technical schools in that state.

* Gene Bottoms is Associate State Director of Vocational Education, Georgia Department of Education, Atlanta, Georgia.

REPORT ON THE QUESTIONNAIRE USED FOR THE VOCATIONAL EDUCATION GUIDANCE INSTITUTE

Paul Wilbur *

One of the purposes of the institute was to demonstrate more effective means of determining the needs of the vocational student. It was felt that follow-up studies would be of particular benefit. A pair of questionnaires were developed that would parallel each other on a number of facets of employment. Each participant was asked to give five sets of questionnaires to former students and their employers. Then these sets were to be brought to the institute where the data could be analyzed.

Of the fifty participants only twenty-nine brought back questionnaires. These results were pooled for some norming information and then each individual's results were reported to him with emphasis on the fact that there was very little data on which to draw significant conclusions.

Five categories were reported: Help Index for first Job, Help Index for Present Job, Self Evaluation Score, Training Evaluation Score, and Employer Evaluation Score. These were reported on a paired basis along with how the total group responded to these factors. Also a total difference score was reported on all parallel items. Reliability estimates of the instrument were also determined and found to be very high. (.85 - .95)

To define the five categories more carefully, Help Index for the First or Present Job was an attempt to determine if the former student perceived his school to have been of assistance and if so to what degree in obtaining his first job or his present job. Such items as number 1 - 9 on the employee's questionnaire were included in these indices. Parallel items on the employer's questionnaires were numbers 21 - 24. Self Evaluation Scores were to supply a measure of perception by the employee of his performance on the job. Items such as numbers 32 - 36 on the employee's instrument were used to evaluate this factor. A measure of the former student's attitude toward his preparation by the school for his present job was the Training Evaluation Score. This concept was sampled by items such as 20 - 24 on the employee's questionnaire. The last category, Employer Evaluation Score, was an inventory of various aspects of the employee's performance as tested by items such as 35 - 39.

The stress in this report to the group on the final day of the Institute was to show the value of a follow-up questionnaire. A number of desirable outcomes could result. Among these would be the contacts that might result in additional placements of students, changes that could be brought about in curriculum and guidance services, better understanding of work-a-day world by the school personnel, and the possibility of better public relations for the school district.

* Paul Wilbur is Associate Professor of Psychology, State University College, Oswego, New York 13126

III. EVALUATION OF INSTITUTE

Evaluation Procedures

The procedures and instruments utilized to evaluate Institute IX were designed to assess both an increase of knowledge and possible attitudinal changes of the participants in the areas of vocational education and guidance. It was felt that if the Institute were successful, some change might be evidenced in both of these aspects of behavior, immediately following the Institute and six months later. An instrument to measure knowledge and attitudes which was used to gather immediate pre-institute and post-institute data was designed by the coordinating office, which was supplemented by questions which pertained specifically to Institute IX. In addition, another instrument was developed by the staff of Institute IX to measure long term effects and possible program innovation in a six month follow-up study. The third instrument used to evaluate the Institute applied specifically to the planning, organization, and actual operation of the Institute. This form was also developed by the coordinating office. Copies of each form may be found in the appendix to this report.

Evaluation Form I was administered during the first and last session of the Institute. This instrument consisted of 73 items designed to measure general attitudes toward vocational education, its purposes, conduct and impact. Responses were on a five point scale from strongly agree to strongly disagree. An undecided category was provided, but its use was discouraged in the directions to the respondent.

Form II was administered at the last session of the Institute. The same format was utilized, with the addition of eight open ended or free response type items. These additional items were designed to allow the participant to comment upon specific aspects of the operation of the Institute both positively and negatively and as such to provide useful information for the planning and conduct of future short-term institutes of this nature.

ANALYSIS OF THE EVALUATION FORMS I AND II GIVEN AT THE VOCATIONAL EDUCATION INSTITUTE AT STATE UNIVERSITY COLLEGE AT OSWEGO

Before any conclusions as to the effectiveness of any institute can be made, the adequacy of the instruments must be determined. Both instruments used in this institute showed the necessary psychometric characteristics to lend confidence in the findings. The reliability estimate for Institute Evaluation Form I was .807 pre-institute and .797 post-institute. The reliability estimate for Institute Form II was .92. These data lend support to the conclusion that the questionnaires were more than adequate. (See Table I).

The results obtained from Form I would lend support to the hypothesis that the Institute was highly effective in changing the attitudes of the participants. Pre-Post differences in responses in a positive direction were significant beyond the .001 level. Means and SD are presented in Table II. (See table in Appendix). Of these items whose response patterns tended to change, over 2/3 changed in a positive direction. The second instrument which was an evaluation of the institute itself was clearly very favorable. One hundred percent of the items had a median response in a positive direction. It would appear that the institute was considered by the participants as very appropriate to their needs.

Included in this report are several item analyses which include individual scores and response patterns obtained from Form II and the Pre-Post administration of Form I. Also included is an item by item display of Pre-Post responses on Form I. (See appendix labled Comparison of Pre-Post). For convenience, responses obtained from the pre-test for each item are displayed directly above the responses obtained from post-testing.

TABLE I

Reliability Data

Instrument I	Pre O/E = .807 Post O/E = .797
Instrument II	Corr. O/E = .92

TABLE II

Scoring — Scored on a 5 pt. Scale

Device	Adm.	Items	$\overline{X}$	SD
Inst. I	One only	32	123.6	14.8
Inst. II	Pre	73	269.6	17.8
Inst. III	Post	73	278.6	16.7

Differences on Instrument I

Mean differences between Form I Pre-Post 9.00
SD of Differences 17.4

t // 3.6 P < .001

Pearson r Pre-Post = .495

Instrument II

100% of items generated at least 60% favorable comment.

90% of items generated at least 70% favorable comment.

Median category weight assignment by subjects for items was 4.

Post-Institute Evaluation

The Post-Institute Evaluation form was devised by the staff and included twenty-five items from Form I and five new items. The new items were designed to determine if any innovations which may have been suggested at the Institute had been put into practice locally. Thirty-two participants or 57 per cent of the participants returned the Post-Institute Evaluation form. This response, while not as good as might have been hoped for, is very close to the typical response rate of return for follow-up studies.

Data from this phase of the evaluation procedure was analyzed in the same fashion as in earlier evaluation activities, that is comparisons were made between administrations item by item and for total score. In this phase, only previous data for the follow-up respondents was used, not that of the total group. As indicated in the following table, change in attitude was found from the end of the Institute to the follow-up in a positive direction, that is toward more favorable attitudes toward vocational education on the part of the respondents.

TABLE III

	Pre-follow-up	Post-follow-up
Pearson	.49	.58

Data from the five new items indicated that in all instances planning was going on at the local level to implement some of the program innovations suggested by the Institute. The final open ended question was answered by 75% of those who responded to the follow-up and gave evidence that Institute participants were evolving or initiating plans for more community resource groups for vocational education and placement. It was disappointing tonote that few school districts have actually tried out in-service training programs for counselors in this area.

Conclusions

1. Participant acceptance or rejection of the Institute

From a review of all of the evaluation forms used for Institute IX it appears that in general participants accepted the Institute. The shift of attitudes in the desired direction, towards more positive concern for vocational education and guidance is strong evidence of this. That six months following the Institute, there is some evidence that school districts are making plans to increase their involvement in these areas is also positive indication of the success of the Institute. It should be pointed out that, in general, the Institute participants rejected concern for post-secondary school technical training programs. A possible explanation of this factor may be the school technical training programs. A possible explanation of this factor may be the deep concern expressed by most participants for changes in their own school situations.

2. Attainment of Objective and Outcome

Evidence presented in preceding sections of this document, and in the various appendices, clearly indicates that Institute IX was successful in meeting most of the stated objectives and appears to have had some impact on school district planning. Specifically the working papers developed during the Institute, the comments included in the evaluation procedures give credence to the notion that this Institute was successful in modifying attitudes, increasing knowledge and providing guidelines which should improve the quality of vocational education and guidance in metropolitan areas.

3. Other Pertinent Positive and Negative Reactions

In considering other reactions to Institute IX both positive and negative, the staff has constantly been aware of the impact of personal interactions which took place during the Institute. Short-term Institutes of this nature provide participants with the opportunity to learn from one another, to share program ideas and to establish contacts on a regional basis which tend to increase communications at a professional level. This appears to be one of the most positive reactions to Institute IX. A second positive reaction to the Institute was the reaction of the participants to the resource personnel and the speakers who were present at the Institute.

The most pertinent negative reaction to the Institute had to do with the Task Force Groups. At least one group, and possibly two, met with difficulty in accomplishing their task. It has been noted by the staff that these groups were more negative in all of their reactions to the Institute, although in most cases the desired attitudinal change did occur. Possible explanations for these negative reactions appear to be the sequence in which the invited speakers were present, (the group working on the Specialty Oriented Student was without a resource person until the last working day of the Institute), and the assignment of some participants to Task Force Groups in a somewhat random manner, which the staff had felt would provide for greater cross - fertilization of ideas. In addition, it was evident to the staff and some of the participants that race became a stumbling block to open and honest communications in some of the Task Force Group Meetings.

In summary, it appears that Institute IX was a successful undertaking, in spite of some of the negative reactions discussed above. For the most part, objectives and outcomes were met by the Institute. It should be noted that even at this date it is impossible to assess the total impact of this undertaking.

IV. RESULTS, CONCLUSIONS AND RECOMMENDATIONS

Objectives of the Institute

In the planning and carrying out of Institute IX the following objectives were formulated and put into action:

To acquaint guidance personnel with:

- the requirements of entry level jobs
- the great variety of job skills provided by vocational programs
- the necessity for being conversant with the real needs of modern industry, business and agriculture
- the tremendous need to build in youth a respect for jobs which contribute to our economic and social well-being and which do not require a college education

Programmatic sessions, group discussions and special events were held which were directly related to meeting these objectives. In addition, Institute participants gathered follow-up data on former vocational students, which was analyzed, in an effort to direct their attention to some of the strengths and weaknesses of vocational education and guidance programs. (The objectives of this Institute were presented and discussed in detail in chapter I of this report.)

Participant Contributions

The major contribution of the Institute participants was the development of the Task Force Group reports. (Copies of these reports are to be found in the appendix to this document.) In general these reports focused upon current practices in vocational guidance and education, and included suggestions for program modifications and innovations. Although each report differed in content, all reports dealt with a central problem of the Institute: how to increase counselor involvement in vocational education and guidance through in-service training sessions.

Contributions of resource and consultant personnel toward the stated objectives varied to some degree with the particular assignment given to each. Those consultants invited to present formal papers provided specific information thought to be relevant to the Institute topics. Others served as facilitators offering contributions on a continuing basis to the work of the Task Force Groups. In all instances resource and consultant personnel functioned to enhance the success of the Institute in meeting the stated objectives (A more detailed discussion of the uses made of resource personnel has been included in chapter II.)

Attainment of Objectives

A more thorough discussion of this topic may be found in chapter III of this report. In summary, the Institute staff, supported by the evaluation data previously

APPENDIX A

SAMPLE MATERIALS USED TO SOLICIT NOMINATIONS FOR INSTITUTE IX

APPLICATION MATERIALS

NOTIFICATION OF SELECTION LETTERS AND INFORMATION ABOUT ACCOMMODATIONS

presented and by responses to open ended questions, feels that the Institute did meet the stated objectives. Evidence of attitudinal change, program innovations and increased communication among the Institute participants in the last few months strongly supports this assumption. It would seem presumptious to state that far reaching changes have occured because of attendance at a short-term institute, but it does appear fairly certain that the first steps are being made towards meeting the stated objectives and as a result evidence has been presented which does in fact indicate greater counselor concern and involvement in vocational education and guidance.

Conclusions and Recommendations

At present, it is impossible to assess the long term impact of the short-term Institute; however, the following conclusions seem justified:

1) Institute participants were exposed to a variety of new developments and innovations in the field of counseling and guidance with emphasis upon models for in-service training of counselors, placement methodology, development of media and materials for disadvantaged youth and programs for the technically oriented pupil.

2) Institute participants were provided with the opportunity and format to exchange ideas and innovations now in effect in a variety of settings which might prove useful in their own school districts in working with the vocational student.

3) Participants were given the opportunity to take part, on a limited basis, in a follow-up study of vocational pupils, an experience which may serve as a model for more effective evaluation of programs now being carried on in their home districts.

4) From the follow-up instruments which were received, it is apparent that one significant change which has occured, is that some of the participants are now involved in placement and follow-up of vocational graduates - whereas they had previously taken the attitude that they should not be involved.

Recommendations from Institute IX fall into two categories. One part consists of specific recommendations generated by the discussion groups for program innovations. These are presented in the final reports of each group and included in another section of the report. The second type of recommendation comes from the experience of those persons who were responsible for the planning and organization of the Institute. Specifically we recommend that short-term institutes of this nature be held immediately prior to or after a major national convention such as American Personnel and Guidance Association, or American Vocational Association. School administrators and counselors must limit the amount of time they are absent from their jobs and we felt that in many instances we did not have as participants those administrators we would have liked due to the closeness of our dates to other professional meetings.

Enclosed is a booklet entitled "Training Professional Personnel Responsible for Vocational Technical Education Eastern Metropolitan Areas."

This booklet describes ten separate institutes which have been funded from the United States Office of Education in a grant to Temple University of Philadelphia, Pennsylvania. Temple University, in turn has made separate contracts with several other universities to assist in the operation of these institutes.

At State University of New York, Oswego, we are concerned with Institute 9, entitled Development of Vocational Guidance and Placement Personnel for Metropolitan Areas.

We hope you will identify the top person from your administrative staff who is responsible for all vocational guidance personnel in your system to attend this institute—or better yet come yourself !

Further information is enclosed regarding the times and funding available.

Sincerely,

Gordon G. McMahon
Chairman, Department of
Vocational Technical Education

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encs.

A short time ago, you should have received a booklet entitled "Training Professional Personnel Responsible for Vocational Technical Education Eastern Metropolitan Areas."

This booklet described ten separate institutes which have been funded from the United States Office of Education in a grant to Temple University of Philadelphia, Pennsylvania. Temple University, in turn has made separate contracts with several other universities to assist in the operation of these institutes.

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We hope you will identify the top person from your administrative staff who is responsible for all vocational guidance personnel in your system to attend this institute.

Further information is enclosed regarding the times and funding available.

Sincerely,

Gordon G. McMahon
Chairman, Department of
Vocational Technical Education

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enc.

APPENDIX B

NAMES OF PARTICIPANTS

NAMES OF CONSULTANTS

Participants---Institute IX
Development of Vocational Guidance and Placement Personnel

BARR, DONALD	4212 Winoma Street Flint, Michigan 48504 Flint Board of Education Guidance & Counseling
BECK, RICHARD	270 East State Street Columbus, Ohio 43215 Columbus Public Schools Counseling
BOLDEN, BERTHA	4814 Blagden Avenue N.W. Washington, D.C. 20011 D.C. Board of Education Health Occupations Education
BURN, CHARLES	6237 Karenstone Drive Charlotte, N.C. 28215 Charlotte-Mecklenburg Schools Guidance
CANNON, JOS.	1002 New Street Ayden, N.C. 28513 Pitt Technical Institute Guidance
CARPENTER, CHARLES	124 Green Springs Rd. Indianapolis, Indiana 46224 Metropolitan School Dist. of Wayne Township Administration & Guidance
CHAMPION, JOSEPH	P.O. Box 16070 Charlotte, N.C. 28216 Charlotte-Mecklenburg Schools Inds. Educ. & Guidance
CHRISTENSEN, THOMAS	25 Calumet Ave. Worcester, Mass. 01606 Worcester Public Schools Guidance
COOK, HELEN	2930 Forrest Hill Drive Atlanta, Ga. 30315 Atlanta Public Schools Occupational Information Materials Project

DEBOLT, WILLIAM	600 Wyndhurst Ave. Baltimore, Maryland 21210 Maryland State Dept. of Educ. Vocational Technical Education
GARRISON, LEROY	Bridgeton High School--West Ave. Bridgeton, New Jersey 08302 Guidance (Vocational)
GLASCOE, FELICIA	5913 Eastern Ave. N.E. #9 Washington, D.C. 20011 Dept. of Pupil Personnel Services Guidance
HARGES, DOUGLAS	372 Wyatt Rd. Harrisburg, Penn. 17104 Harrisburg Community College Student Personnel
HOOKER, CLOYD	528 Chisolm Trail Knoxville, Tenn. 37919 Beardon High School Guidance
HUDSON, MAUDE	227 E. Plume St. Norfolk, Va. 23510 Norfolk Public Schools Guidance
HUNTER, THOMAS	230 E. Ninth St. Cincinnati, Ohio 45202 Cincinnati Public Schools Guidance
HUTTENGA, ORLO	600 Shawnesee Ave. Flushing, Mich. 48433 Flint Board of Educ. Guidance
JACKSON, EUNICE	545 Humboldt Buffalo, New York 14208 Buffalo Board of Education Pupil Personnel Services
JENKINS, WILLIAM	721 South 86th St. Birmingham, Ala. 35206 Birmingham Board of Education Guidance

JOHNSON, BEVERLY	2970 Peachtree Rd. N.W. Atlanta, Georgia 30315 Occupational Information Center for Educ. Guidance
KYLE, GENE	800 Blaine Ave. Racine, Wisc. 53405 Unified School Dist. #1 Racine Ct. Guidance--Voc. Educ.
LABORDE, GERALD	1028 W. Park Drive Knoxville, Tenn. 37921 Univ. of Tennessee Indus. Educ. Ed. Psych. & Guidance
LEE, ALBINE L.	1057 Ardmore Drive Louisville, Ky. 40217 Jefferson Ct. Public Schools Ass't. Director, Psy. Services & Sec. Guid.
MAROON, EVELYN	13906 Wainstead Ave. Cleveland, Ohio 44111 Cleveland Public Schools Guidance
MAYCHECK, ROBERT	1357 Prospect Rd. Pittsburg, Pa. 15227 Pittsburg Public Schools Assoc. Dr. Pupil Services
MAYO, WILLIAM	58 Forrester Rd. Wakefield, Mass. 01880 State College Salem Mass. Guidance
MEASECK, KENNETH	41 Glenwood Ave. Glens Falls, N.Y. 12802 Board of Coop. Educ. Services Guidance
MILLER, JOAN	106 Deer Path Drive Churchville, Penn. 18966 Northeast High School Guidance
MITCHELL, JACK	1100 Liberty St. Knoxville, Tenn. 37019 Knoxville State Area Voc. Tech. School Supv. of Student Services

MORUCCI, LOUIS	Mayfair House, Lincoln Drive Philadelphia, Penn. 19144 Philadelphia Board of Educ. Guidance
MOSS, HUGH	2319 Colorado Trail S.W. Atlanta, Ga. 30331 Atlanta Public Schools Guidance-Pupil Services
PAYNE, WILLIAM	2597 Avery St. Memphis, Tenn. 38112 Dept. of Voc. Tech. Educ. Administration & Guidance
PERRY, OBERLIN	2122 N. Fulton Ave. Baltimore, Maryland 21217 Baltimore City Schools Guidance & Placement
PHILLIPS, CHARLES	2011 Otsego Drive Fort Wayne, Indiana 46805 Fort Wayne Comm. Schools Div. of Voc. & Con't Educ.
POST, FERRIS	1895 Gulf-toBay Clearwater, Florida 33515 Pupil Services Div. Pinellas Ct. Adult & Voc. Guidance
ROMANO, RALPH	54 Beverly Rd. West Hartford, Conn. Bulkeley High School Guidance Dept. Hartford Schools
RANDALL, LEWIS	28 Discovery Rd. Vernon, Conn. 06086 State Dept. of Educ. Div. of Voc-Tech Educ.
ROBINSON, JOSEPH	4620 Brewster Ave. Louisville, Kentucky 40211 Louisville Public Schools Guidance & Pupil Personnel
ROBINSON, HAROLD	P.O. Box 869 Wilmington, Del. 19899 Wilmington Public Schools Child Development & Guidance

SCHRAGE, JOSEPH	1415 Fairview St. Oshkosh, Wisc. 54901 Guidance & Personnel
SHERER, HENRY	R.D. #5 Box 173 Dover, Del. 19901 Kent Ct. Voc. & Tech. Schools Guidance
SINGH, HARSHARAN	745 W. Washington Ave. Madison, Wis. 53715 Univ. of Wisc. Counseling & Guidance
SMITH, ROSE	5824 Morrowfield Ave. Pittsburg, Penn. 15217 Pittsburg Public Schools Assc. Dir. Pupil Services
SUMMERVILLE, MATTHEW	13th & Poplar St. Wilmington, Del. 19801 Wilmington Public Schools Guidance
THOMAS, DONALD B.	328 Kerr Drive Johnstown, Penn. 15904 Greater Johnstown Area School Board Voc. Tech. Educ.
TIPTON, BEULAH	2730 Veltre Place S.W. Atlanta, Georgia 30311 Atlanta Public Schools Guidance & Counseling
VISCARELLO, RICHARD	28 Allston St. Revere, Mass. 12151 City of Boston School Dept. Guidance
WADE, JAMES	270 East State St. Columbus, Ohio 43215 Columbus Public Schools Ass't Supt. Div. of Pupil Services
WEAVER, CHARLES	751 Northeast Blvd. Columbus, Ohio 43212 Ohio Dept. of Educ. Division of Guidance & Testing
TYLER, BIRDIE	900 Falcon Drive S.W. Atlanta, Georgia 30311 Atlanta Board of Education Guidance

C O N S U L T A N T S

Patrick Dempsey	Director of Guidance Syracuse Board of Education 409 West Genesee Street Syracuse, New York
Mr. James Wade	Assistant Superintendent Division of Pupil Services Columbus Public Schools Columbus, Ohio
Mr. Richard Beck	Supervisor, Vocational and Career Services Division of Pupil Services Columbus Public Schools Columbus, Ohio
Dr. Leon Lomonaco	Assistant Professor of Education Assistant to the Associate Dean of Teacher Education at Brooklyn College of The City University of New York Brooklyn, New York
Nicholas Acquaviva	Curriculum Consultant Department of Vocational Technical Education State University College Oswego, New York
Dr. Charles Weaver	State Supervisor of Guidance Services Ohio State Department of Education Columbus, Ohio
Richard Walker	Regional Coordinator - Syracuse Vocational Technical Education Department State University College Oswego, New York
Dr. Raymond Reisenger	Regional Coordinator - Albany Vocational Technical Education Department State University College Oswego, New York
Justice Cheney	Associate Professor Vocational Technical Education Department State University College Oswego, New York
William Krall	Assistant Professor Vocational Technical Education Department State University College Oswego, New York

Dr. Frances Koenigsberg	Associate Professor School Psychology & Counseling Program State University College Oswego, New York
Dr. Paul Wilbur	Associate Professor Psychology Department State University College Oswego, New York
Dr. Thomas Mustico	Associate Professor of Education State University College Oswego, New York
Sidney Johnson	Assistant Superintendent Occupational & Continuing Education Syracuse Public Schools Syracuse, New York
Dr. Gene Bottoms	Associate State Director Vocational Education State Department of Education Atlanta, Georgia
Dr. Norman Gyspers	Professor of Education University of Missouri Columbia, Missouri
Dr. Kenneth Hoyt	Professor of Education University of Maryland College Park, Maryland
Dr. Albert Jochen	Associate Director of the Multiple Institutes Department of Vocational Education Temple University Philadelphia, Pennsylvania
Burton Thelander	Associate, Guidance Bureau New York State Education Department Albany, New York
George Davis	Division of Vocational Technical Education United States Office of Education Washington, D.C.
Charles Smallwood	Western Electric Company Columbus, Ohio

Students from Central Technical High School in Syracuse	Anthony Adams	Edward Cupoli
	Carolyn Brown	Vicki Tiedemann
	Mildred Early	Winefred Jones
Student from Ohio's South High School	Jeff Thompson	

APPENDIX C

THE DAILY PROGRAM SCHEDULE

DATE Monday, May 4

INSTITUTE IX

DEVELOPMENT OF VOCATIONAL GUIDANCE AND PLACEMENT PERSONNEL
FOR
METROPOLITAN AREAS

GROUP CODE - TG - Total Group
TFG - Task Force Group

TIME	IN CHARGE		PROGRAM
9:00	McMahon	TG	Introductions Pre-Test
	Dempsey	TG	Panel - Central Tech High School Seniors Placement from the Students Point of View
10:15			COFFEE
10:30	Wade Beck Smallwood Thompson	TG	The Columbus Program
11:40			LUNCH
1:15	LoMonaco	TG	
2:15	McMahon	TG	Discussion of Specific Objectives for Task Force Groups
3:00			COFFEE
3:15	Task Force Chairman	TFG	Task Force Selection of Chairman and Recorder Work Planning
			Delivery of Day's Report by Recorder

DATE Tuesday, May 5

INSTITUTE IX

DEVELOPMENT OF VOCATIONAL GUIDANCE AND PLACEMENT PERSONNEL
FOR
METROPOLITAN AREAS

TIME	IN CHARGE		PROGRAM
9:00	Bottoms	TG	Job Placement - The Georgia Model
10:20			COFFEE
10:40	Koenigsberg	TG	A Review of Specific Objectives
10:50	Task Force Chairman	TFG	Task Force Examination of Dr. Bottom's Presentation
	Task Force Chairman		Selection of 1:15 Panel Member
11:40			LUNCH
1:15	Cheney	TG	Reaction by Specialists from each Task Force
2:45			COFFEE
	Task Force Chairman	TFG	Task Force Work Session
			Delivery of Report for Day by Task Force Recorder

DATE Wednesday, May 6

INSTITUTE IX

DEVELOPMENT OF VOCATIONAL GUIDANCE AND PLACEMENT PERSONNEL
FOR
METROPOLITAN AREAS

TIME	IN CHARGE		PROGRAM
9:00	Gyspers	TG	Follow - thru work adjustment education
10:20			COFFEE
10:40	Task Force Chairman	TFG	An Examination of Dr. Gysper's Presentation. Will it Work in Your City? What did Dr. Gysper's Presentation Contribute Toward Task Force Assignment?
11:40			LUNCH
1:15	Reisenger	TG	Reaction by Specialists From each Task Force
2:15			COFFEE
	Task Force Chairman	TFG	Work Session
			Delivery of Report by Recorder

DATE Thursday, May 7

INSTITUTE IX

DEVELOPMENT OF VOCATIONAL GUIDANCE AND PLACEMENT PERSONNEL
FOR
METROPOLITAN AREAS

TIME	IN CHARGE		PROGRAM
9:00	Hoyt	TG	Speciality Oriented Students Research
10:20			COFFEE
10:40	Hoyt	TG	
11:40			LUNCH
1:15	McMahon	TG	How Do We Know When Vocational Education is Doing its Job?
2:15	Task Force Chairman	TFG	Final Work Session
2:30			COFFEE
			Delivery of Report by Recorder

DATE Friday, May 8

INSTITUTE IX

DEVELOPMENT OF VOCATIONAL GUIDANCE AND PLACEMENT PERSONNEL
FOR
METROPOLITAN AREAS

TIME	IN CHARGE		PROGRAM
8:45	Wilbur Mustico	TG	The Value of a Follow-up Instrument Report on Findings of Questionnaires
10:20			COFFEE
	Task Force Chairman	TFG	Final Reports by Each Task Force Group
12:00			Post Tests(2)
			FINISH!
			COFFEE

APPENDIX D

MATERIALS DEVELOPED FOR THE TASK FORCE GROUPS

Directions for Task Force Groups:

Monday

1. Each group should designate a chairman and a recorder.
2. Go over suggested guidelines and discussion topics. Make any additional suggestions for discussion which group members feel appropriate to the designated topic.

All Week

3. Each group will function in two ways:
   a. (morning session) to serve as a discussion group focused upon the topic of the day's presentation. At this time, questions and reactions should be generated for the afternoon panel session.
   b. (afternoon session) The general task is to develop a working paper on the assigned topic to be ready for presentation Thursday. The general focus for all groups should be on in-service training for counselors of vocational education pupils.
4. Recorders will prepare a written report of each afternoon's work session to be turned in to Dr. McMahon by 8:00 p.m. each evening. This report can be developed from both notes taken by the recorder at the session and from tape recordings made of the session. Copies of the report will be made available to the specific Task Force Group members for the following afternoon session.
5. Chairman will have the following responsibilities:
   a) to function as group leader
   b) to designate panel members to react to the morning presentations
   c) to select a group member to present the "Friday morning" report (the report should not be read)
   d) to assist the recorder in the development of the working paper

Inservice Training Models for Metropolitan School Districts

There exists a need to find new ways of helping such youth to realize the dignity and worth of themselves as people and the work they (choose to) do in an automated - technological society. Pupil specialists who work with non-college bound pupils, both those who terminate their secondary school education before graduation and those who complete a vocational course, have special needs for inservice training in the area of placement and information services. In essence, counselors who have been traditionally charged with this responsibility, must be given the opportunity to increase their skills in working with this segment of the normal school population. In-service education focused upon greater understanding of the job (and training) selection process of the vocationally oriented student, new ways of disseminating information about local job opportunities, and more effective counselor involvement in the placement process is needed.

This Institute is asked to address itself to the broad task of proposing new models of in-service education. The following topics which is not an exhaustive list, may provide a starting place for discussion:

a) types of in-service programs now being used in Metropolitan School districts for counselors of vocationally oriented schools and a consideration of their strength and weaknesses.
b) new approaches to in-service programs which might include innovative practices such as
    1) released time for workshops, industry visit, and follow-up research
    2) new ways of utilizing local agencies such as the USES, representatives of industry, federally funded vocational programs, etc.
    3) other means to increase counselor involvement in the information process and placement aspects of guidance
c) methods of evaluating the effectiveness of in-service programs and generating new models when necessary.

It is expected that the working papers prepared by this Institute will reflect some ideas for new and innovative in-service training programs of counselors and other pupil specialists. While the emphasis of the report will be upon practical suggestions, it is hoped that it will also include some consideration of possible directions which in-service training models might develop in the future, such as the local development of computer simulated models which instruct pupil specialists in specific aspects of the counseling process as it relates to working with vocationally oriented pupils.

Each working paper should cover the following topics:

1) Suggested in-service training models
2) Content for in-service training sessions generated from the group's discussion of their assigned topic ie Job Placement, SOS Research, Follow-through Work Adjustment for the Disadvantaged, Work Models for the Disadvantaged
3) Innovations in guidance and counseling already in practice which are deemed highly successful
4) Suggestions for future practice which might depend upon additional funds, and/or personnel, (give yourself some "room to dream").
5) Possible ways of re-organizing existing programs and personnel to provide more services of a higher quality to the vocationally oriented pupils and to insure more effective placement.
6) Suggestions of how pupil specialists might be more effective in working with representatives from industry and business, as well as other non-school agencies, in the area of placement and in general guidance of vocationally oriented pupils.

Topic - Development of Work Models for the Disadvantaged

Rationale:

Educators and psychologists have been aware for sometime of the effects of role models in the shaping of human behavior. Parents, teachers, heros and other mature individuals have traditionally functioned in this capacity for the developing young person. However, it has been recognized that most disadvantaged young people lack or have lacked models who are successful in the world of work, and therefore frequently fail to develop the necessary behaviors and attitudes for vocational success and satisfaction.

The task of this discussion group is to develop suggestions for assisting counselors and other Pupil Personnel Specialists in their efforts to help disadvantaged pupils learn about their opportunities in the world of work, with special emphasis on the notion of role models. The following are some suggested topics for your consideration:

a. what resources are available in the school system and the community for the development of materials about vocationally successful minority group members?
b. what means are now being employed in metropolitan school systems to enhance pupils' learning about the world of work which focus on the use of role models?
c. what are some specific ways, other than the use of materials, which might help disadvantaged pupils come into contact with vocationally successful role models? For example would interviews by students be effective?
d. how could the guidance program make effective use of former pupils and graduates in the development of models for disadvantaged students?
e. what types of inservice training programs are needed to help counselors become more effective in this area?

It is anticipated that the working paper prepared by the group will include your consideration of some of these topics and any others you judge to be relevant. The focus of your report should be upon content for in-service training sessions for counselors and other pupil personnel specialists who may need to enhance their skills in helping disadvantaged pupils make satisfying work adjustments. It is hoped that your suggestions will be practical and can be put into operation. Remember, all enrollees, as well as consultants at the institute may serve as resource people to your group.

TOPIC: Follow-through Work Adjustment for the Disadvantaged

Efforts by counselors and other educational personnel to assist culturally disadvantaged individuals to make advanced work adjustments are not new. There is a need, however, to increase our effectiveness in this area if these people are to successfully meet the continuing demands of the work world. Ways need to be developed to help disadvantaged persons find appropriate role models to emulate in shaping their vocational behavior. There also is a need to develop more effective means of communicating information to them about the work world. Just as important is the need to develop ways to provide adequate follow-thru activities once they have entered the public market and attempt to adjust to the demands of a work place.

The task of this discussion group is to address itself to the development of appropriate and practical ways of working with disadvantaged persons as they encounter the demands of the work world. The following questions will be only a few of the possible topics which may provide useful in your deliberation.

1. How can present guidance practices be extended and improved to assist vocationally oriented disadvantaged persons meet the continuing demands of the work world?
2. Are special considerations needed for the pupil placement of disadvantaged pupils? If so, what are they?
3. What efforts should be made at local levels to assess employment possibilities for these pupils?
4. Should special types of information about the work world be developed for disadvantaged pupils? If so, what types?
5. What evaluative procedures are needed to insure continual updating of program objectives and processes?

It is hoped that the report will reflect considered and thoughtful concern for developing ways to assist disadvantaged pupils within the school setting as they make the transition to the world of work and meet the continued demands of their situations. To accomplish this will require the coordinated efforts of other agencies, perhaps some yet to be established. Please include in your report suggestions for establishing effective working relationships among these agencies and the school.

TOPIC: S.O.S. RESEARCH

RATIONAL:

Specially Oriented Students are those secondary school pupils who are interested in pursuing vocational training beyond their graduation, but not typically in a college setting. Because this goal involves selection of training programs and specific institutions, students frequently need assistance in evaluating the program they will enter, as well as the occupation they will train for. Counselors and other pupil specialists who work with technically-oriented need assistance in updating information in this area and the opportunity to improve their skills in working with such students. Problems of identifying specially oriented students and developing guidance programs for them must be dealt with, if a number of critical manpower shortages are to be met, on the one hand, and if counselors are to effectively provide services for all segments of the pupil population on the other.

This discussion group has been given the following task - to prepare a working paper which should focus upon some of the following notions which are considered to be relevant to the topic of providing greater and more effective service to specially-oriented-students.

a) how can we identify the specially oriented student at an early date in his secondary school career?
b) what special considerations should be made in the development of guidance programs for S.O.S. pupils which will insure maximum exposure to the wide variety of training programs available, as well as to information about employment opportunities, locally, regionally and nationally?
c) what new kinds of media and materials do counselors need to develop their effectiveness with the S.O.S. program?
d) how can we evaluate local effort to assist the technically oriented student?
e) how can we make use of former students who are now employed in technical occupations?

It is expected that this group will draw upon the resources of the entire enrollment of the institute in drawing up suggestions for programs for specially oriented pupils, as well as resource people in attendance. Your focus should be upon programs and program content for in-service education for counselors and pupil specialists.

Topic - Job Placement of Vocational Students in Metropolitan Areas

Rationale:

Counselors (and other pupil specialists) need to learn new ways of carrying through the Placement aspects of their jobs. They also need to constantly up-date the kinds of information they use in working with pupils who plan to enter the world of work directly from secondary school. Because of the vital nature of job placement for vocational students, this discussion group is asked to direct itself to the following topics.

a) who does job placement in Metropolitan schools?
   1) what is the role of the placement specialists?
b) how is the effectiveness of placement program evaluated?
c) should there be pupil specialists who are in effect placement counselors? If so, how should they be selected? Trained?
d) what is the relationship of the counseling and guidance staff to the United States Employment Service? Should changes be made in this relationship?
e) what other resources are available to counselors?
f) how should information about the world of work be integrated into guidance programs for job-oriented youth?
g) how can information be up-dated efficiently?
h) can more use be made of personnel workers in business & industry?

It is suggested that as you discuss the questions posed that you make use of all group members as resource people, that is share ideas about practices of the various school systems represented. Other institute enrollees in other groups may be consulted as well as resource people from State Offices and agencies at the Institute. In your discussion other topics may arise, these should be included whenever the group feels they are appropriate.

It is expected that your group will produce a working paper which will serve as a guideline for:

a) describing the role of placement activities in a PPS program in Metropolitan Schools
b) describing the job of the counselor as a placement specialist
c) describing means of evaluating the effectiveness of:
   1) guidance activities related to placement
   2) placement as a function of guidance
d) suggestions to improve placement practices
e) practical suggestions for increased use of information

It should be remembered that the report of your group may serve as resource materials for in-service training sessions in a wide variety of settings.

The efforts of the four task force groups were coordinated by Drs. McMahon and Koenigsberg. As the week progressed considerable pressure was generated in an effort to make the task force chairman responsible for the position paper of his group.

Although these papers were generated and delivered by the deadlines indicated, it was generally accepted that the greatest professional growth brought about by the task force approach resulted from the intercommunication established.

APPENDIX E

FINAL REPORTS OF THE TASK FORCE GROUPS

BLUE GROUP

TOPIC: Job Placement of Vocational Students

CHAIRMAN: Dr. Charles Weaver

RECORDER: Mrs. Bertha Bolden

The initial discussion started with an investigation of the meaning of placement. Does placement mean just placement on a job, or does it mean job information, job techniques, follow-up and evaluation? From this emerged what the duties of the placement counselor should be.

1) Check on students while actually being trained in the shop.
2) Help student make plans for a job while still in training.
3) Work with students in accuracy, attendance, motivation
4) Give guidance in level of skill when applying for a job.
5) Open doors for him when it is time to look for a job.
6) Do follow-up and evaluate student in his first job.

The group agreed that placement counselors were needed for the following reasons:

1. Students need adult help when looking for a job.
2. To work with Employment Service because they do not always have the rapport with students, communication with industry and understanding of student needs.
3. Employment Service needs help from placement counselors in schools to evaluate student on his first job, to encourage student in his endeavors and to motivate continued efforts to do well.
4. There needs to be a team relationship between the school and Employment Services to give the student full benefit of evaluation.

Placement counselors' training should have:

1. Shop skills as well as counselor skills.
2. Built-in public relations in community, direct contact with industry and a determination to know available jobs.
3. A different job description than guidance counselors.
4. Ability to sell community for need in hiring students.
5. Ability to know what community wants in jobs so that placement is as accurate as possible.

Who does job placement in Metropolitan Schools?
Various ways were described by the group as:

a) Placement counselors with vocational backgrounds are placed in high schools.

b) Counselors or shop teachers who take the responsibility.
c) Placement counselors from U.S.E.S. in areas where rapport has been established between school and agency.
d) Industry and private organizations who know school programs and will ask for a number of students in various occupations.
e) Students who are motivated to find employment.
f) Job coordinators who are working with work-study programs.
g) Business Education personnel who work in Cooperative programs.

How can information be up-dated efficiently?

1. By publishing every year or two years the apprenticable trades which are available within your city or state. Included should be:

   a) An analysis of the trades should be done.
   b) Location of the apprenticable trades in the city or state and the types of occupations available.
   c) Terms of the trade should be explained so that when trades or occupations are referred to, counselors, specialists etc. will understand what is being said.
   d) Explore the related information to the apprenticeship trade which the student needs to become skillful.
   e) Classify the apprenticeship trades and give an explanation of what the trade requires. These can be related to the skills taught within the schools at which time skills can be taught to meet the needs of the trades in the community, city or state.
   f) The cities should be identified as to where the apprenticable trades are located so the counselor will know where possible jobs may be found.
   g) All such information should go to every counselor within the state.

2. By having workshops for counselors on a continuing basis throughout the school year in which such subjects are discussed as:

   a) Guidance and the Destination Crisis
   b) Black and white confrontation
   c) Vocational guidance - Examples of the Developmental Approach
   d) Sensitivity training for the urgency to relate academic work to occupational training

What is the relationship of the counseling and guidance staff to the United States Employment Service? Should changes be made in this relationship?

1. It is the opinion of the group that

   a) Teachers or placement counselors are better able to work with placement
   b) Teachers can manage occupational information better
   c) U.S.E.S. very well manages occupational surveys and statistical data because of their computer systems
   d) U.S.E.S. will take the leadership in testing and interpreting tests for job placement

e) Counselors believe they can very well do this themselves and better because they have background knowledge of student and his trade. Placement should not be on testing alone.
f) There is a need for a development of a cooperative working relationship between U.S.E.S. and school counselors to get the greatest benefit for job placement for students
g) U.S.E.S. responds well in sending available employment possibilities to schools which counselors can use
h) U.S.E.S. acts as a clerical service only in supplying statistics and data
i) Counselors are of the opinion that not all job opportunities are given to U.S.E.S. Private industry and government often comes directly to the schools

Should Changes Be Made in This Relationship?

Because of Federal funding schools are obligated to placement and U.S.E.S. has been designated as the agency responsible for placement therefore:

1. School personnel should begin immediately to change attitudes towards the services of U.S.E.S. and force them into action.
2. U.S.E.S. should concentrate on giving more positive and comprehensive services in job placement.
3. Both the school and U.S.E.S. should concentrate on developing rapport with each other.
4. School personnel should sincerely pursue the services of U.S.E.S. which it is obligated to give.
5. U.S.E.S. counselors need orientation and sensitivity training to student needs and their trades, professional involvement in the educational objectives of training programs and sensitivity training to student problems.

What other resources are available to counselors?

1. Dictionary of Occupational Training
2. Occupational Hand Book
3. Board of Trades
4. Urban League
5. Service Clubs (Action Resources)
6. Kiwanis Clubs
7. Chamber of Commerce
8. State Advisory Council
9. School Advisory Committee
10. Students who have graduated and who are employed will return for conference with students
11. Industry inviting students to visit plant
12. Parents of students
13. Students who hold jobs for the summer and return to school in the fall are an immediate available resource to the counselor
14. Use peer supervision

How is the effectiveness of placement programs evaluated?

1. Student retention in the initial placement
2. Student satisfaction on his job
3. How well student develops work habits
4. Dislike of job on part of student
5. Students reasons for leaving the job
6. Whether student was able to adjust to the job because of personality, ability to do the job
7. Length of time student stayed on job and reasons for leaving
8. Reports from personnel as to students' reasons for leaving
9. Develop a criteria for asking students and employer reactions in follow-up
10. Suggestions from student and personnel for ways of improving placement and program
11. Factors to follow-up in evaluation would be:
    a) salary increases
    b) promotions
    c) job changes
    d) unemployment spans
12. Questionnaires to employer to find out:
    a) reason for leaving
    b) satisfactory employee
    c) attitude
    d) adequately prepared

Should there be pupil specialists who are in effect placement counselors? If so, how should they be selected? Trained?

1. Should be counselors with in-service training
2. Select those counselors for placement counselors who have a special desire to work in placement
3. Training for these specialties for the counselor should be done by the Division of Guidance and Testing in the State Department as:
    a) Seminars
    b) Workshops
    c) Periodic meetings for a day
    d) Area meetings
    e) Summer in-service institutes
    f) Career development workshops
    g) Employment of counselors for two weeks in plants and factories to get an overview of all occupations, talking with persons, interview by personnel. Arrangements are made for counselors to talk with all personnel in factory

How should information about the world of work be integrated into guidance programs for job oriented youth?

1. Orient parents to the classifications of jobs other than professional occupations
2. Have subject teachers realize how their subject is used in the world of work

3. Have teachers in in-service sessions to teach them how to relate their subject material to the world of work
4. Involve parents in school program in relation to their occupation in the community
5. Planning trips to industry

Can more use be made of personnel workers in business and industry?

1. Invite personnel to schools to discuss with counselors what they need and are looking for. Counselors can then guide students and teachers in the direction that will be most profitable
2. Bring former graduates back from industry who have been successful in their career. They can discuss how they got their job, how they have been upgraded and which courses helped them develop and the importance of having special backgrounds
3. Industry needs to visit to explain how they will help a student to grow and develop into responsible employees. They have scholarships for advancement and in-service education for those employees who wish to grow
4. Extend to business the same privileges to hold career development days on a regular basis so that all of their jobs can be fully explained and explored by students. Counselors should do this as part of their regular program.

How can placement information be updated efficiently?

1. When making initial contacts for job placement with agencies, the counselor could inform the personnel what they would like to be given, on an on-going basis, the job information at specific times or when they would be updating. A calendar of events could be made when the businesses state they are updating. If information is not sent to the counselor, he could then recontact the businesses for updated information.
2. The Supt. of Documents of the government Printing Office publishes listings of the occupational picture nationwide. A tally could be made for your own area from this listing.
3. Occupational Materials Centers have been established in some areas whereby occupational or job information is sent from all of the companies in the area. A coordinator in charge sends all information to the counselors in all of the schools. On the birthdate of each bit of information the coordinator recontacts the companies for new updated job information which is again distributed to the counselors.
4. In the placement office a chart can be made of all of the names of the businesses and/or industries who employ in the area with the types of job classification needed in their company. As jobs are filled student names will appear. Each year a re-check could be made with the agency for new jobs (variety) and could be added to the list. This would show how many had been employed and the type of occupations students had been placed in along with the number of students employed.

GOLD GROUP

TOPIC: S.O.S. Research or Vocationally Oriented Student

CHAIRMAN: Maude Hudson

RECORDER: Lewis Randall

SPECIALLY ORIENTED STUDENT

The specially oriented student exists! Where he is and who he is will be discovered by our increased ability to meet his career guidance needs in an informed, concise, continuous, and democratic manner.

In essence we are responsible for offering a program of world of work guidance services which enable the specially oriented student to identify himself, his needs, his goals and enter into purposeful, personal, program of self actualization.

"WHERE THE CONCENTRATION IS"

I. Communications with Business and Industry which lead to the ability to:

A. Relate to students, factual, first hand knowledge regarding:

1. employment opportunities (current and accessible)
2. skills necessary for consideration
3. tools and techniques to deal successfully with management and other employees
4. actual regards of career (salary, fringe benefits, personal satisfaction)

B. Relate to Business and Industry for purposes of:

1. Causing Business and Industry to be aware of needs of students, the school, and society in general
2. Increasing the understanding of Business and Industry in ways to assist schools in developing manpower
3. Causing Business and Industry to increase financial support to schools and to use their influence to elicit increased financial support from the public
4. Developing resources to bolster classroom instruction
5. Developing confidence in the ability of the school to carry out its intended function
6. Making optimum use of all resources available to the school (greatly unused)
7. Assisting the school in order to expand into a more realistic role by allowing introspection from without

II. Communications with students which lead to increased ability in:

A. Understanding the Vocationally Oriented Student

1. Language (How he communicates)
2. Needs, physiological, psychological and social
3. Methods of his expression
4. His priorities

B. Interpreting the Specially Oriented Student to Business and Industry, with stress upon the following characteristics:

1. His desirability as a worker
2. His availability
3. His further training needs
4. His demands on the world of work

C. Interpreting the Specially Oriented Student to the school - Staff & Advisors

1. For curriculum revision regarding career development
2. For student expression
3. To facilitate Specially Oriented Students equally with other programs

D. The "In-House" Publicity Movement

1. Regularly published departmental Newsletter (insure readability, language, destruction, relevance, format, In-put)
2. School paper
3. School Bulletins
4. Public address system
5. Bulletin Boards
6. Displays which emphasize opportunities for the specially oriented student
7. Placing counselors where the action is (that is, wherever they will be accessible to students, members of the school staff and the community at large)
8. House room activity period
9. Student organizations

III. Communications with the school and staff leading to increased ability of counselor to:

A. Work with teachers to assist them to:

1. Discover individual weaknesses in instruction and the ability to relate to needs, abilities, techniques of working with Specially Oriented Students
2. Gain acceptance of the guidance program
3. Provide career development information as it relates to this subject matter area
4. Provide career development experiences for teachers

B. Work with Administrators to:

1. Help create a perspective and atmosphere within the school which will facilitate the job of the counselor
2. Assistance with gaining increased funds to operate the guidance program

IV. Communications with community and parents leading to increased ability in:

A. Sharing information concerning world of work and Vocational Education opportunities for all students

B. Gaining support for carrying out the world of work guidance functions

C. Gaining financial support for guidance and the entire school program

D. Understanding what services are best supported by the home and what are best supported by the school

E. Gaining home and school cooperation in counseling students

V. Evaluation and follow-up

A. Evaluate the effect of the guidance program

1. annual surveys
2. periodic follow-ups of former students

B. Evaluate the effect of the total school on pupils and former students

1. to provide feed-back on:
   a. guidance services
   b. curriculum
   c. school climate
   d. any special programs offered by the school

C. Evaluate the effect of the local work sector on students

1. job availability
2. job status
3. reactions of employers to:
   a. employee's training and performance
   b. the school, with emphasis on the guidance program, and vocational education

IN SERVICE FOR IMPROVEMENT OF GUIDANCE

Assist counselors through group activities or individual counseling to plan and perform some of the following functions:

I. Communications with Business and Industry

A. Incorporate representatives from local Business and Industry personnel departments into the guidance department on a temporary revolving basis (include unions, etc.)

1. Provide attractive, desirable office space for resource personnel
2. Schedule meetings with counselors, staff, students, parent and Business and Industry
3. Individual and group meetings with students to discuss
   a. application procedures
   b. job adjustment
   c. salary, fringe benefits
   d. career ladder
4. Personnel officers bring in:
   a. employee models - local, non-local, past graduates staff
   b. products
   c. economic and advertising techniques
   d. first-hand experiences for students and staff through field trips and contact with workers
   e. special assistance to skill areas pertinent to the company (i.e. Distributive Education)
5. Publicity for projects involving cooperation between the school and business and industry

ORANGE GROUP

Topic: Development of Work Models for the Disadvantaged

Chairman: Mr. Matthew Summerville

Recorder: Dr. William Payne

Facilitating Career Development and Job Placement

I. Organization of the program for a united effort

In the organizational phase members of the community's power structure should be employed to assure attainable goals. This is vital because students should be told the truth about what opportunities are present in their area of interest. The students will ask pointed questions and the answers they receive should be "like it is". The human relations aspect and teamwork of all participants was stressed by the group as necessary ingredients of the program. During the organizational phase the advisory committees between industry and education could lend valuable support and aid in placement.

II. Use of school and community resources in the development of pertinent career information

A. The creation of an occupational information center in each school community to research and publish job information describing the job opportunities locally. The organization of agencies to function in a resource capacity such as the local merit employer's associations, the local chamber of commerce, the local school system, the state department of education and local universities to furnish representation on an advisory committee. The funds for such a center and its staff could be provided on a project basis (NDEA, Title 5A, special projects section). Some of the questions answered in the occupational briefs could be as follows:

1. What is the full name of the company?
2. What is their operation?
3. Who do they employ?
4. What benefits do they offer employees?
5. What are the different educational levels desired?
   a. person who hasn't completed secondary school
   b. high school graduate
   c. person who has attended a two year college or area vocational school
   d. person who has graduate from college with attention to specialization area

B. The dissemination of information to all students may be accomplished as follows:

1. Use of mass media
2. Use of meaningful work models
3. Use of a computerized job bank to store all the occupational information in the computer center in the central office of the school system (computer terminals would be installed in each secondary school guidance center and the job description briefs on most community job opportunities would be easily accessible).
4. Use of microfilm may be employed and would be helpful in classifying and storing the data.

III. Use of successful role models in motivating students vocationally

A. Careful selection of models for minority-poverty students is important. The models should be people with whom the students can relate. Successful black businessmen who have made it and have moved into more affluent communities may lose some of their effectiveness as work models. The personal contact with the work model on a local basis is important, and it is very difficult for students to identify with historic models.

B. The methods of presentation of the models to the students can be accomplished as follows:

1. The most effective presentation of the models to the students would probably be in person with the model spending time with the students in small group settings.
2. The use of television tapes is also effective and educational television stations could be utilized at minimum expense
3. The use of audio tapes can be employed and presented by counselors, teachers and special interest personnel
4. The use of printed matter that would be easily read and attractively illustrated.

IV. How to motivate individuals who do not value work:

A. Attention needs to be given toward reaching people with whom steady employment was not a significant factor. The problem of attracting and holding individuals to the world of work who presently survive without steady employment is a multi-factored one. There must be an incentive present that will significantly better meet the individual's needs in order for him to change his life style. In many cases, young people's models at home do not demonstrate by performance that steady employment works best. This causes many of these young people to be more difficult to motivate towards steady employment in agreement with employer demands. It seems that meeting immediate needs and desires is

uppermost in the minds of some of these youngsters rather than long range planning (vocationally or otherwise).

B. A combination of approaches toward finding a solution for the group are as follows:

1. The use of mass media
2. The creation of structured vocational opportunities that insure a certain degree of success and reward (physically and psychologically)
3. A closer working relationship between school and home to help provide assistance in meeting basic physical needs in an acceptable manner and assistance in restructuring the home attitudes toward education and employment.

V. Additional approaches to aid in career development

A. School systems should provide in-service training programs and summer vocational guidance institutes for counselors and vocational teachers. Contacts should be made during these programs with local labor union officials, management representatives and staff members from the state employment service.

B. The use of paid paraprofessional assistance and/or volunteer placement individuals should be considered. Their duties would include routine clerical assistance such as filling out application forms, getting medical examination forms completed, seeing the applicant gets to his interview, gathering any information the student needs, and contacting businesses to solicit their help in placing students.

C. A more effective job of follow-up should be accomplished in most school systems. The data collected could be used to help determine the instructional needs and to inform the students of occupational opportunities and trends.

D. More consideration should be given to year-round schools using the four quarter system. Besides better utilization of school plants, the four quarter system would have the advantage of graduates completing high school at four different times during the year rather than flooding the labor market all at once.

BROWN GROUP

TOPIC: Follow-through work adjustment for the Disadvantaged

CHAIRMAN: Joseph Schrage

RECORDER: Members of the group

I. Follow-through work adjustment for the culturally disadvantaged involves a commitment by counselors which extends beyond the traditional limits of the school program into the world of work. It is based upon the assumption that some students need assistance to make a meaningful transition to employment because they lack certain knowledges, skills and attitudes necessary to holding a job. Support by counselors during the first few months of employment appears to be one effective way to increase job-holding power.

A. In-service training programs to increase counselor effectiveness with follow-through programs.

1. T. groups (sensitivity training for counselors)
2. Group guidance techniques

B. Suggestions for helping young people through periods of adjustment to the world of work.

1. Stress self-worth of the individual
2. Sell the need of the individual
3. Observe self-improvement of the person
4. Focus upon the positive influences from school and working peers
5. Develop the Big Brother concept with representatives from the world of work
6. Free counselors from some time-consuming tasks to work with youth already employed
7. Recognition that good counseling is a counselor's best selling tool
8. Use of employers to assist with follow-through counseling
9. Use of service clubs to assist with counseling

C. Innovative suggestions for working with disadvantaged youth

1. Employ a full time counselor for 12 month position to work specifically with the follow-through program
2. Use of present resources for follow-through
   a) teachers who may have developed rapport with disadvantaged youth
   b) representatives from industry who are sensitive to the problems of follow-through work adjustment
   c) parents who understand the background of the pupil

d) other staff members who might be available for summer work with the disadvantaged pupil
e) civic and/or service clubs which might develop special programs to assist with follow-through work adjustment

D. Funding of programs for follow-through work adjustment

1. There is a need for sufficient funds to work with all people
2. Funds should not be as restricted as they are presently
3. Exploration is needed for more effective use of the funds now available

E. Innovative activities needed to help youth reach vocational maturity

1. On-going career guidance K-12
2. Curriculum evolvement
   a) more flexibility in scheduling
   b) greater dialogue between students, faculty, counselors, parents, administrators and representatives of business and industry
   c) greater use of field trips to industry and community agencies
3. Suggestions for group guidance program K-12
   a) being an effective student
   b) staying in school
   c) knowing yourself
   d) selecting 9th grade subjects
   e) looking at the world of work
   f) looking into the future
   g) getting and holding a job
   h) developing a positive personality and character
   i) facing problems

F. Evaluation, needs and process

1. There is a need for a department within the school to do research focused upon evaluation of programs in the area of counseling and guidance
2. All evaluation should start from a clear-cut statement of goals or objectives of the program
3. Emphasis should be placed upon the quality of the evaluation, not just numbers

REVIEW OF TASK FORCE EFFORTS

The reports of the four task force groups were in many ways a reflection of the personalities involved. Each task force took on a personality somewhat distinctly its own.

Dr. McMahon and his staff, in their many contacts with the participants, continually emphasized the need for local guidance personnel to become more knowledgeable about the vocational offerings of their school systems, why certain occupational areas are offered, why others are not offered, why the area employment statistics should provide the guides for program offerings, and why the guidance personnel must be involved in the placement and follow-up of the vocational graduate.

Although the participants offered no organized resistance to these ideas, there was considerable discussion which indicated that many were of the opinion that this approach was ideal but probably not workable in their particular school systems.

APPENDIX F

TEXTS OF FORMAL PAPERS

IMPROVING COUNSELOR EFFECTIVENESS
through
SUMMER VOCATIONAL GUIDANCE SEMINARS

(Prepared for Short Term In-Service Multiple Institute Number Nine, "Development of Vocational Guidance and Placement Personnel for Metropolitan Areas.")

-- Charles E. Weaver
Supervisor, Guidance Services
Division of Guidance and Testing
Ohio Department of Education

The Vocational Education Act of 1963 placed a high degree of importance on guidance and counseling. In its definition vocational education includes vocational guidance and counseling in connection with established vocational training programs. The implication of this is that all phases of the vocational program can be developed to include strong vocational guidance and counseling provisions.

The five areas of vocational education in Ohio are: agriculture, business and office education, distributive education, home arts, and trade and industrial education. Any school having five programs in one or more of these areas available for their students became eligible under the Vocational Education Act of 1963 to employ a vocational guidance coordinator on a half- or full-time basis for nine months or a full year. His salary was reimbursed on a fifty per cent basis up to a maximum reimbursement of $4,500 for full-time employment.

In order to qualify for reimbursement, the following conditions needed to be met:

1. Each eligible school could employ <u>one</u> vocational guidance coordinator.
2. Vocational guidance coordinators needed to be certified as a school counselor.
3. Employment of a vocational guidance coordinator must have been an expansion of guidance programs that were already in operation.

No reimbursement was permissable either under the School Foundation Program in Ohio, or Title V-A, NDEA, although the guidance coordinator's time could count toward meeting the required Title V-A counselor-pupil ratio for reimbursement.

In cooperation with Ohio State University and Kent State University two vocational guidance seminars were held at each of these universities during the summer of 1965. These seminars were two weeks in length and were planned to upgrade certified counselors in their knowledges and skills of vocational guidance. These were considered pilot seminars and were followed by written evaluations and recommendations by their directors.

During the months of October and November 1965, personnel from the Guidance Services Section of the Division of Guidance and Testing held a number of meetings and discussions concerning the desirability of expanding the Vocational Guidance Seminars for school counselors in Ohio. These meetings lead to the following activities:

1. An interest survey of all school counselors in Ohio was conducted during December to determine the extent of counselor willingness to participate in summer seminar experiences.
2. The results of the survey were used as a basis for proposing the number and location of vocational seminars to be held.
3. Tentative plans for the vocational seminars were presented to the Director of the Division of Vocational Education, Dr. Byrl R. Shoemaker, with a request for financial support of the seminars.

The survey of Ohio school counselors was conducted during December 1965. A Memorandum was forwarded to all Ohio school counselors which read as follows: "Two-week vocational guidance seminars are being planned for the summer of 1966. These are being sponsored under the Vocational Education Act of 1963 by the Division of Guidance and Testing, and the Division of Vocational Education, State of Ohio, Department of Education. Each participant will receive $100 plus one round trip reimbursement for travel expenses. Arrangements can be made with the sponsoring university for room and board and university graduate credit if desired.

"The vocational guidance seminar objective is to provide opportunities for counselors to work with guidance and vocational education specialists for the purpose of increasing their effectiveness in assisting students in course selection in vocational planning. Probable areas of emphasis will include:

1. Survey of vocational education philosophy and objectives.
2. Review of legislation affecting vocational education.
3. Survey of vocational programs sponsored by vocational education.
4. Visitations to on-going vocational school programs.
5. Review the role of community resource agencies.
6. Consideration of orientation of approaches to vocational education.

In each case the emphasis will be placed on the practical aspects and will be facilitated by visitations, guest speakers, and resident staff members.

"Counselor eligibility specifications for attendance are:

1. Certified as a school counselor in the State of Ohio.
2. Currently employed as a counselor in a junior or senior high school in the State of Ohio having at least one approved vocational unit, or in a feeder school to such a program (<u>or promise of such employment in 1966-67</u>)."

It was also indicated that the successful completion of one such vocational guidance seminar was a prerequisite for future employment as a reimbursed vocational guidance coordinator under the Vocational Education Act of 1963.

Eight hundred seventy-two respondents from a total of 1,599 expressed an interest in attending a vocational guidance seminar, and an additional 727 indicated they were either not interested or not eligible. The survey was reported to Dr. Byrl R. Shoemaker, Director, Division of Vocational Education, at a meeting held on January 12, 1966. A discussion of the results of the survey lead to the formulation of the following agreements and plans:

1. Approximately $80,000 was to be budgeted by the Division of Vocational Education for fourteen two-week seminars.
2. The seminars were to be distributed as follows: two each at Bowling Green State University, Ohio University, and the University of Cincinnati. Four each were scheduled at both Kent State University and The Ohio State University.
3. A budget outline for each seminar was to be prepared by personnel from the Division of Guidance and Testing.
4. Curriculum guidelines for the seminars were to be prepared by personnel from the Division of Guidance and Testing.
5. A meeting of the Directors of the proposed seminars and appropriate personnel from both the Division of Vocational Education and the Division of Guidance and Testing was to be held on February 4, 1966.

At the February 4 meeting the counselor educators representing the five universities examined the budget and the curriculum guidelines that had been prepared. The following understandings were reached:

1. A representative from each of the five university sites for the proposed seminars agreed to submit a proposal to Dr. Shoemaker. The proposal was to be in the form of a letter stating that the counselor education department which they represented desired to sponsor summer seminars for vocational guidance as outlined and agreed upon.
2. Upon receipt of the proposal, Dr. Shoemaker agreed to send a letter of acceptance which was to provide the representatives of the respective universities a base upon which to reserve classrooms and make other necessary arrangements for staff facilities.
3. Dr. Weaver agreed to inform all interested school counselors about the dates and location of the seminars. He further agreed to prepare a form which would serve as the uniform application for enrollment in the seminar programs.
4. The counselor educators agreed to handle the enrollment of seminar participants at their respective universities. They further agreed to provide publicity, when feasible, to supplement that of the Division of Guidance and Testing.
5. The counselor educators also agreed to evaluate each seminar and report their findings.

Fourteen vocational guidance seminars were again conducted during the summers of 1967, 1968, and 1969. The University of Toledo, in cooperation with Penta County Joint Vocational School, was a participant during these three summers. One of their typical 2-week schedules is identified in Appendix A.

The seminars were expanded in 1968 to include training programs for counselors who had previously attended a two-week summer vocational guidance seminar. In 1969 the summer vocational guidance seminars were further expanded to include seminars for counselors who were currently employed as vocational guidance coordinators.

The approved budget for these seminars has remained unchanged. Total allowable cost per seminar is $5,825 with the following categories as guidelines: Professional Salaries, including a director, instructor, retirement at 11%, consultants and travel, and student assistance total $2,548. Secretarial and Materials including salary and retirement for the secretary, bus travel for trips, and supplies and instructional materials total $566. Overhead and Student Cost including 10% for overhead, $110 for maintenance allowance for 20 enrollees, and one round trip travel for each enrollee total $2,711. The total allowance for the fourteen seminars is $81,550.

Congress has again emphasized guidance in the Vocational Education Amendments of 1968. In this law there is a clear indication by both the House and Senate that funds from the Amendments be used for guidance in the elementary, junior, and senior high schools. The difficulty, however, is that no monetary guarantee for guidance is provided in the Act, even though there are over 30 references to the possible finding of vocational guidance and counseling.

The Vocational Guidance Amendments of 1968 are being hailed by national leaders as the "most far-reaching legislation for vocational education ever enacted." They are the most comprehensive in all of their provisions as well as being the largest in amount. Passage of the Act, even though it was unanimous in both the House and the Senate, does not assure that the money will become available. The real battle still lies ahead in implementing it with appropriations. Securing appropriations to implement the Act remains an immediate challenge.

CEW:bjb
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APPENDIX A

TYPICAL SCHEDULE

for a

VOCATIONAL GUIDANCE SEMINAR

(Basic)

Two Weeks

Schedule for First Week

Time	Monday	Tuesday	Wednesday	Thursday	Friday
	Welcome & Introductions (Mr.Kingsley)	Bureau of Vocational Rehabilitation (Mr.Young)	Trade and Industrial Education Program (Mr.Hunt)	Home Economics Program (Mrs.Jones)	Bureau of Apprentice Training Programs (Mr.Wendt)
8:30	Graduate Credit & Administration (Dr.Bernhoft)				
9:00	Assignment Pre-Vocational Guidance Awareness (Mr.Eigensee)				
10:15	Current Status of Vocational Education in Ohio	OVIS Orientation (Mr.Adams)	Tour of T & I Facilities (Mr.Hunt)	Tour of Home Economics Facilities (Mrs.Jones)	Use of Tests & Measurements in Vocational Education & Guidance (Mr.Higgins)
12:00	Lunch	Lunch	Lunch	Lunch	Lunch
1:00	Vocational Development Theories (Dr.Prediger)	Vocational Agriculture Program (Mr.Pease)	The Vocational Teacher (Mr.Tolles)	Tour of Haughton Elevator	Professionalism (Dr.Weaver)
2:45	Workshop Session	Tour of Vocational Agriculture Facilities (Mr.Pease)	Pre-plant Tour Planning and Orientation (Mr.Mills & Mr.Earl Tate)	Tour Bunting Brass	Practical Problems in Counseling (Mr.Eigensee)

TYPICAL SCHEDULE

for a

VOCATIONAL GUIDANCE SEMINAR

(Basic)

Two Weeks

Schedule for Second Week

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:30	Practical Problems in Vocational Counseling (Mrs.Fought)	Report to Toledo Area Personnel	Vocational Development Theory (Dr.Prediger)	Vocational Orientation A Career Night (Mr.Marquart) (8 a.m.)	Reports and Discussion of Assignments
10:15	A look at Technical Education by Industry (Mr.Ballard)		Occupational Work Experience Program (Mr.Macer)	Hiring and Training the Disadvantaged (Mr.Carroll)	
12:00	Lunch	Lunch	Lunch	Lunch	Lunch
1:00	The Business Education Program (Mr.Knepper)	Some Characteristics of the Disadvantaged (Mr. Kingsley)	Tour of Larc Lane School and Sheltered Workshop (Mr.Soarz)	Plant Tour Chrysler Corporation	Evaluation and Post-Vocational Information Survey
2:45	Tour of Business Education Facilities	Follow-up of Personnel Office Visitation			

FOLLOW THROUGH WORK ADJUSTMENT FOR THE DISADVANTAGED

Norman C. Gysbers
University of Missouri

Beginning with the Employment Act of 1946 the people of America through the Congress have expressed continuing concern about utilizing the full potential of individuals in the labor force. Events in the 1960's turned this expression of concern into concrete programs of action through the passage of numerous pieces of Federal legislation on employment and unemployment. The private sector of our economy also has been active, developing local, state, and national programs of training and retraining. Throughout the 1960's particular attention has been focused on training and retraining programs for groups of people variously labled the disadvantaged and/or the hard core unemployed. Most of the programs for such groups have included combinations of basic education, skill training, and worker role orientation activities. My task is not to review completely the total scope of the thousands of such programs in operation today. Rather, it is to focus specifically on the follow through work adjustment activities found in many of these programs to provide you with ideas and guidelines as you develop and manage your own programs in this area. For those who wish information about resources which list and discuss other aspects of programs across the country please refer to the references at the end of this paper and the bibliography which follows the references.

SOME BASIC ASSUMPTIONS

In establishing guidelines for follow through work adjustment activities for the disadvantaged, certain assumptions need to be made about the general behavior of the disadvantaged as a basis to determine how counselors and other educational personnel can best intervene to help the disadvantaged meet the demands of a work place.

ASSUMPTION ONE

Many disadvantaged persons have ways of living which have allowed them to survive in which work is not a significant factor. When periodic attempts to work do not succeed, they revert back to previous modes of survival - - and they do survive.

ASSUMPTION TWO

There are some broad general life themes which are typical of the disadvantaged. These include:

1. a fatalistic belief in uncontrollable and predetermined external forces
2. an orientation to the present - the here and now - with an attached feeling that it is useless to focus on the future
3. a belief in the material over the intellectual, the concrete over the abstract, and action over concepts and words.

ASSUMPTION THREE

While there are some common characteristics which seem to apply to most disadvantaged persons and counselors need to know this, it is more important that counselors attend to the unique ways each individual differs from the norm. For example there are some generalized notions concerning the kinds and types of employability skills which all persons need and counselors need to be aware of them. But it is probably more important to remember that there is a particular need for counselors to attend to the unique ways individuals have of interpreting these generalized notions into their own day-by-day way of operating.

ASSUMPTION FOUR

To create an impact on the behavior of people (values, attitudes, etc.) it is necessary to get them active--doing things--behaving differently as compared to verbally being told that they should behave differently.

These assumptions or ones of a similar nature serve as the basis for choosing the appropriate strategies to use in developing effective follow through work adjustment programs.

Some Principles for Effective Program Development

Just as it is difficult to generalize about the characteristics of the disadvantaged (or any other population for that matter) so is it difficult to specify general principles for effective follow through activities. There are some points, however, which should apply widely to those aspects of programs which focus on work adjustment.

STATEMENT ONE

Effective follow through activities of work adjustment should begin far in advance of the completion of formalized skill training. Worker role orientation activities and employability skills must be carefully integrated into ongoing skill training programs. Job placement must be viewed as job development in these programs. It is not merely finding a job for a person.

STATEMENT TWO

If possible, training and jobs should overlap. There are several reasons why this is important.

1. By following this procedure, time is compressed between training and job entry. This removes the risk that the hard-to-employ will lose interest. This procedure also takes into account the here and now orientation frequently found in disadvantaged persons.
2. Learning skills and having knowledge about job openings does not guarantee job placement because those involved may not always translate this knowledge into actual behavior.

3. The action orientation and purposefulness of a job is a useful training medium. Based on the assumption that it is necessary to get people into action to modify their behavior, the day by day occurrences in an actual job setting provide an effective learning medium. The actual context of the job serves as stimulation for discussion and behavior change.

STATEMENT THREE

Pre job placement (employability skill and worker role orientation activities) and work adjustment activities on-the-job should be carefully articulated in both the nature of the content and personnel who carry out the activities. Where possible there should be carry over of training and personnel so that activities at both ends of the program are seen as a whole rather than as disjointed or non related activities. Counselors who participate in the training portion of a program also should participate in work adjustment activities on-the-job. The reason for this is that when disadvantaged persons meet on-the-job challenges or run into difficulties they can confide in counselors who are knowledgeable about their unique ways of adjusting to problems. Counselors who have worked with these individuals on pre job activities know the sabotage techniques likely to be used when on-the-job stresses occur. They also will know something about the family constellations of disadvantaged persons. Sometimes family interaction patterns may produce on-the-job difficulties with the end result that the disadvantaged workers will be forced to quit work.

STATEMENT FOUR

Companies who hire disadvantaged persons will find it necessary to modify their behavior and policies.* This principle will impact in at least two areas--hiring practices and the expected job behavior of company personnel. How companies handle these areas for the disadvantaged persons on their payrolls will effect the adequacy of their work adjustment.

1. Hiring Practices
   To employ disadvantaged persons companies frequently find it necessary to lower their regular hiring standards. This poses a dilemna for companies. How can they provide meaningful orientation to their existing work force about the "uniquenesses" of the disadvantaged without overemphasizing these "uniquenesses" and thus promulgating already existing stereotypes and prejudices.
2. Expected On-the-Job Behavior
   The same dilemna which exists about hiring practices also exists in the on-the-job behavior of disadvantaged persons. How do companies excuse the inappropriate behavior of disadvantaged employees while penalizing regular employees for similar kinds of inappropriate behavior.

*PRINCIPLE FOUR was adapted from comments in an article "Dual Standards in Employing the Hard Core" by Rosen and Blonsky in Personnel Administration, March-April, 1970.

To resolve these dilemnas, and thus the work adjustment problems which may result for both groups of employees, it is suggested that disadvantaged employees initially be labeled as job trainees. This term is accepted industrial terminology and thus can be used to explain differential hiring practices and job behavior expectations to regular employees. Careful attention must be paid, however, to providing a systematic basis for reviewing the progress of these trainees so they feel they are progressing and are not second class citizens.

STATEMENT FIVE

Follow-up is an integral part of follow through work adjustment activities. What happens to disadvantaged persons once their connections with formalized programs (preservice and in service) have been concluded may be more important than what happened to them during their association with a program.

These five statements are suggestive of the points which should be considered as a basis for follow through work adjustment activities. Continued development of a larger body of verified information is needed.

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Amos, W. E. and Grambs, J. D., Counseling the Disadvantaged Youth, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968.

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Freeberg, N. E., Development of Evaluation Measures for Use with Neighborhood Youth Corps Enrollees, Princeton, New Jersey: Educational Testing Service, U. S. Department of Labor Contract # 66-00-09, December 1968.

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Robinson, J. P., Athanasior, R., and Head, K. B., Measures of Occupational Attitudes and Occupational Characteristics, Ann Arbor: Institute for Social Research, The University of Michigan, 1969.

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U. S. Department of Labor, The Neighborhood Youth Corps: A Review of Research, Manpower Research Monograph No. 13, 1970.

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THE HARD-CORE UNEMPLOYED, AN ANNOTATED BIBLIOGRAPHY

Compiled by Professor Emil Mesics with assistance of Samuel Marcus

INTRODUCTION: The recent past has been accompanied by an intensive concern at the city level and the Federal for the economic and social welfare of the poor in the U.S. One can speculate about reasons for this concern and conclude that it grows out of a sincere interest in bringing the underprivileged into the mainstream of society or that it results from a reaction to the disturbance in some of our Ghetto areas in the past several years. Irrespective of the reasons, the fact remains that effort and expenditure have been accorded to analyses of the total problem and sincere efforts to reach the hard-core unemployed in a desire to facilitate entry into the work force. The result has been the appearance of an abundant analytical and descriptive literature as well as the detailing of public and private sector experiences in handling the problem.

Our purpose in preparing this bibliography has been to identify the current, and most relevant, literature in the field. Mainly we have looked at the periodical and book literature that has appeared in 1968, but it was unavoidable to include material which came out in the several years previous to that time. What appears here is our assessment of the essential and pertinent items dealing with the general problem having to do with national policy and specific applications and techniques drawn from organizational experiences.

GETTING AND HOLDING JOBS BY THE HARD-CORE UNEMPLOYED

BARRETT, RICHARD S. "Gray Areas in Black and White Testing." Harvard Business Review: Vol. 46, No. 1, (January-February, 1968), pp. 92-95.

Instead of consigning all test to the wastebasket because they present problems of class discrimination, the author urges that employers using tests need to develop and validate them to minimize the effect of such discrimination. With valid tests he can hire the best potential employees regardless of race from the available labor market.

CALLENDAR, EUGENE S. "Business and the Hard-Core Unemployed: The Ghetto Subculture." Personnel: Vol. 45, No. 4 (July - August, 1968), pp. 8-14.

Restates the social and economic conditions which cause Ghettos and outlines appropriate roles for black and white leadership to eliminate the conditions. Identifies the efforts of the "street academy" to upgrade the motivation of the underprivileged.

CLARK, KENNETH B. "No Gimmicks, Please Whitey." Training in Business and Industry, Vol. 5, No. 11, November 1968, pp. 27-30.

In order to draw Ghetto youth into employment and training for productive work, employers need to understand the sources of the attitudes they express in various behavioral forms. The author sets forth some of these sources and urges that whatever is done be done with sincerity and respect for the individual's potential. Training programs must be designed in a manner to take into account the effects of a generally inferior educational programs to which Negroes have been exposed, while at the same time holding to performance standards similar to those expected from all employees. This piece can form the basis for training supervisors about the psychology of the Ghetto resident and his learning problems and capacities.

STRAUSS, GEORGE, "The Negro and Apprenticeship: A Review Article." Journal of Human Resources: Vol. III, No. 3 (Summer 1968), pp. 376-383.

A brief analysis to the various elements which have contributed to the low entry rate of Negroes into skilled trades apprenticeship. Assesses the respective roles of management and unions as they have influenced absorption of Negroes in skilled trades occupations.

"The Unfinished Business of Negro Jobs." Business Week: June 12, 1965. pp. 82-84.

A status report on progress being made in integrating minority groups into the work force in 1965. Anticipates the probable effects of Title VII of the Civil Rights Act of 1964 in terms of employer attitudes, finding candidates and training them.

LEARNING AND RETRAINING PROBLEMS

BORUS, MICHAEL E. "The Cost of Retraining the Hard-Core Unemployed." Labor Law Journal, Vol. 16, No. 9 (September 1965), pp. 574-583.

An economic analysis of the cost and employment benefits of training under the 1963 and 1965 Amendments of MDTA. The efforts involved have not drawn substantial numbers of hard-core unemployed into training and ultimate employment despite the higher cost of the effort. Author notes the "vacuum effect" of MDTA training as a means for drawing the hard-core into jobs demanding lower level skill training.

CHANSKY, NORMAN M. Untapped Goods. Springfield, Illinois: Charles C. Thomas, 1966, 267 pp.

Author describes and evaluates the operation and results of the North Carolina program called Operation Second Choice which was designed as a retraining effort to draw dropouts into productive employment. An excellent assessment of the dropout phenomenon and its varied causes explored in depth. Suggest testing, training, and counseling methods for handling dropouts which warrant further experimentation.

GARRITY, JOHN T. "Red Ink for Ghetto Industries?" Harvard Business Review: Vol. 46, No. 3 (May-June 1968), pp. 5-16.

This is another article raising the question of benefit to cost ratio as it applies to Ghetto-centered new industrial establishments. A comparison is made between the economic returns on such an operation and another selected on the basis of typical plant location criteria. Suggests basic elements an enterprise must take into account including government sponsored incentives, and advance managerial planning, in order to minimize risk and to assume social responsibility objectively.

HOOS, IDA R. Retraining the Work Force. Los Angeles, California: University of California Press, 1967, 281 pp.

A comprehensive analysis based on case studies, describing and evaluating various devices for developing knowledge and skills essential for job maintenance in a technological environment of continous change. Views available manpower as a resource rather than a commodity and urges the meaningful use of human talents and capabilities in order to cope with a national social problem.

RIESMAN, FRANK. "New Careers: A Workable Approach to Hard-Core Unemployment." Personnel: Vol. 45, No. 5 (September-October, 1968), pp. 36-44.

Selection and initial job instruction is not enough to keep this category of entrants on the job with any degree of permanence. Normal training procedures must be enhanced with job restructuring, supervisory understanding and cooperation, and opportunities of development and growth.

U.S. Office of Manpower, Automation and Training. Unemployment and Retraining: An Annotated Bibliography of Research.

A useful compilation of books and periodical articles dealing with social-psychological factors in job training and hard-core unemployment. Covers recent concern for the problem as well as references to the problems in the Depression and post-Depression periods.

WEBSTER, STATEN W. (editor) The Disadvantaged Learner. San Francisco: Calif.: Chandler Publishing Company, 1966, 644 pp.

In order to attack the community problems associated with the training and employment of the disadvantaged poor, it is essential to identify and define the nature of the individuals under consideration. This book provides documentation by competent authorities as to the central characteristics of the hard-core unemployed, how they learn, and in turn, how they should be taught. A useful resource text for those engaged in programs to alleviate poverty by employment and training.

EXPERIENCES WITH INTEGRATING THE HARD-CORE INTO WORK INVOLVEMENT

GASSLER, LEE S. "How Companies are Helping the Undereducated Worker." Personnel: Vol. 44, No. 4 (July-August, 1967), pp. 47-55.

Outlines the Eastman Kodak program for drawing those previously considered unemployable into the work force. Describes the role of the Bureau of Fundamental Education in minimizing functional illiteracy. Reports that the program has demonstrated encouraging results.

GOURLAY, JACK G. The Negro Salaried Worker. (American Management Association Research Study No. 70) New York: American Management Assoc., 1965. 103 pp.

Survey report examines what companies have been doing to encourage and increase entry of Negroes into clerical, technical, supervisory, and managerial positions in their organizations. One can conclude that there is evidence of more, but not yet enough, of an increase of employment. The program described can provide the basis for additional efforts to utilize the potentially available skills in the minority population and to identify them with status and prestige level work in organizations.

HAYNES, ULRIC JR. "Equal Job Opportunity: The Credibility Gap." Harvard Business Review: Vol. 46, No. 3 (May-June 1968), pp. 113-120.

A critical article which raises questions about the sincerity of white-collar employing organizations in their actions designed to get them safely under the "Equal Opportunity Employer" blanket. Cites examples of actions which are questionable in purpose. Suggest procedures and practices which will tend to assign more credibility to company efforts to integrate minority members of society into the work force.

National Committee on Employment of Youth. Help for Out-of-Work Youth, New York, 1962, 32 pp.

Very small but positive incursions are being made by various cities into the problems associated with the integration of dropouts into normal employment. This brief report summarized the experiences in three cities citing problems and failures as well as successes. Provides guidelines for community action.

HODGSON, JAMES D., and MARSHALL H. BRENNER. "Successful Experience: Training Hard-Core Unemployed." Harvard Business Review: Vol. 46, No. 5 (September-October 1968), pp. 148-156.

A detailed description of the Lockheed program for training the hard-core unemployed. Includes a variety of approaches at two company locations. Coverage of the educational methods is particularly insightful and cost data is included.

MARSHALL, RAY. "The Employment and Training of Minorities." In Lloyd Ulman (ed.) Challenges to Collective Bargaining. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967, pp. 89-112.

The substance of this paper deals with the institutional forces in the work environment which have served as obstacles to improvement of Negro job entry opportunities. The power and influence of management and labor are identified, as well as the conflicts which bring about problems in labor relations. The unemployed minority member becomes the victim of conflicting institutional forces.

National Industrial Conference Board. Company Experience with Negro Employment. (Studies in Personnel Policy, No. 201) New York, 1966, 2 Vols.

An exhaustive study of company experiences with Negro employment based on work done by a distinguished staff of field interviewers in a variety of establishments. In addition to citing case studies, the report examines the elementary character of Negro employment as an important current national phenomenon.

PATTEN, THOMAS H. JR. and GERALD E. CLARK JR. "Literacy Training and Job Placement of Hard-Core Unemployed Negroes in Detroit." Journal of Human Resources: Vol. III, No. 1 (Winter 1968), pp. 25-62.

The hard-core unemployed are not acceptable for jobs in a substantial number of instances because they lack basic literacy skills. This paper reports a study of an experiment to develop such skills in order to prepare people for job readiness. The study points up the magnitude of the problem and important key limitations to literacy training as a factor in job placement.

Putting the Hard-Core Unemployed into Jobs, A Report of the Business-Civic Leadership Conference on Employment Problem-Chicago, Illinois, June 5-7, 1967, Parts I and II. Washington: Government Printing Office, 1968.

The value of this report lies in the fact that it recites a series of experiences at the company and community levels. Covers a variety of industry and regional exposures so that those interested can pursue the source for greater detail about initiating and conducting programs.

TURRENTINE, JAMES L. "Business and Hard-Core Unemployed: A Corporate Program for Urban Action." Personnel: Vol. 45, No. 4 (July-August, 1968), pp. 15-20.

Describes the comprehensive attack by Pitney-Bowes, Inc. on the problem of bringing workers from minority groups into the mainstream of responsible employment.

U.S. Department of Labor. Finding Jobs for Negroes: A Kit of Ideas for Management Manpower and Automation Research (Monograph No. 9) Washington: Government Printing Office, November 1968, 13 pp.

When a company embarks on a program to equalize employment opportunities it faces problems not normally encountered. This brief, succinct report, based on the experiences of twenty companies, reveals some methods and strategies used to meet such problems. Emphasizes the need for developing, communicating, and administering a viable policy for the organization.

WEEKS, CHRISTOPHER. Job Corps. Boston: Little, Brown and Company, 1967, 241 pp.

An interesting account of the social assumptions behind the Job Corps program, its political history, its administration, and its failures and achievements. A valuable narrative describing one of the nation's attempts to relieve the effect of poverty through social technology.

WORKING PAPER

TRAINING COUNSELORS FOR THE SEVENTEES*

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*This paper is based on a speech presented by the author at the annual convention of the American Personnel and Guidance Association, Las Vagas, Nevada, 1968.

In the context of a rapidly changing industrial America, where technology is fast outstripping our ability to re-design our social institutions to respond to the needs and desires of individual human beings, the educational enterprise is coming under attack with ever increasing frequency. As one studies these attacks there is a common thread running through the communication regardless of the groups from which it eminates. The communication, as I have been able to interpret it is that educators, in their planning, account for the needs and aspirations of the people they serve. People are asking school boards, administrators and teachers to develop educational programs and practices which recognize the dignity and uniqueness of the individual. Self determination, in the face of prolifferating, highly depersonalized bureaucratic institutions, is being demanded by people at all points along the social, economic and political spectrum. Although the demands of the poor and disenfranchized are the loudest and most recognizable, there can be little doubt that "middle-class" America is also transmitting the same message.

If we study students themselves, those most affected by educational practices, it is increasingly apparent that many are living "lives of quiet desparation" as regards their school experiences. As I view the situation the most vocal and rebellious students represent only the very topmost layer of student discontent; a discontent which is manifest by less vocal students, in part, as a resistance to learning. Furthermore, this dissatisfaction does not seem to be limited to the more traditional courses offered in our schools. It would appear that guidance and counseling services (designed to respond, at least theoretically, to the needs of individual students) are also seen as irrelevant by increasing numbers of parents, students, teachers and administrators, particularly in urban settings. The question that must be asked at this time is, why are so many individuals dissatisfied with guidance and counseling services to the point where they are ready to write off such services as non-productive?

Obviously, there are no easy answers to such a question. By turning to the professional literature (which, let us remember, we have written) one could support explanations of this dissatisfaction and dissent which focus on the "psychological deficits" of the individuals - students, parents, teachers and school administrators - who question the relevance of our services. But, to do so is to take the easy way out. To my mind we must first determine whether or not our counselor training programs are certifying professional counselors capable of operating effectively in the field before we can say with any degree of certainty that the difficulties experienced by students are the result of factors over which we have no control. It is my intention, therefore, to address the remainder of my remarks to analyzing the relevance of several rationalle which appear to undergird our present counselor training practices, followed by suggestions for re-directing counselor training programs.

First, I intend to develop the position that for school counselors at least - probably for all counselors - the traditional laboratory training model is obsolete, if in fact it ever had any relevance. Following these comments, I will outline an alternative counselor training option which

represents an extension and modification of models developed at three NDEA Counselor Training Institutes with which I was connected at New York University and The City University of New York.[1]

The Assumption of Individual Pathology

Regarding my first point, I am convinced that the traditional laboratory training model[2] does not provide counselors-in-training with the variety of experiences and learnings they need to operate successfully in the field. This position, vis-a-vis the relevance of the laboratory training model, is based on a formulation of the assumptions that appear to provide the rationalle for training counselors in this tradition. In the first place, it would appear that our training practices are based on a medical-psychotherapeutic model which assumes pathology. In the same way as the medical practitioner, who waits for his patients to seek his assistance when they feel sick, so too have we practiced in an expost facto tradition. We wait for the "client" to tell us that something is not right, and then we try to do something about his "problem." Once made, the assumption of pathology leads logically to providing a work setting that takes the counselor and counselee out of the larger environment. We decide that the "client" must be isolated.

Certainly, there is little one can say against the practice of isolating a seriously ill person, particularly if his disease is contageous. You want to keep him from infecting other people, and, in addition, you also want to keep him from being exposed to new infection which would place an unnecessary and possibly unmanageable burdon on his already weakened defensive systems. So too, in a psychological sense seriously ill individuals need to be isolated from the larger environment. Questions must be raised, however, with regard to counseling and guidance practices, whether they are at the practitioner or training level, which apriori deal with individuals as ill. The major difficulty with the assumption of pathology is that it has lead us to adopt treatment practices which would be better handled by other professionals - psychotherapists for instance - outside the school setting. In addition, this assumption has caused us to focus our attention on a relatively small number of children and youth to the exclusion of that vast majority who, rather than have experiences denied them, need to be exposed to an ever increasing and expanding variety of developmental encounters.

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[1]NDEA Guidance and Counseling Institute, New York University, Department of Counselor Education, Martin Hamburger, Director, 1963; 1964; NDEA Guidance and Counseling Institute, The City University of New York Graduate Center. Arnold Buchheimer, Director, 1968; 1969.

[2]Here, I refer to that model of training which is translated operationally into a setting which brings counseling intern and counselee together in an isolated setting. I prefer to view these settings, equipped with electronic listening and viewing devices, as antiseptic operating theatres designed to exclude as much environmental input as is possible.

We are all aware, I am certain, that in our professional literature we have been advancing the notion of developmentally focussed guidance and counseling practices for some time now. (Mathewson, 1957; Peters and Farwell, 1961) Based on a developmental model, we should focus our attention on the planning of ongoing programs, to which all students are systematically exposed, designed to assist children and youth to successfully negotiate the various developmental stages - emotional and cognitive - through which they must progress. Yet, as long as we hold on to a medical, clinically oriented training model I doubt that we can translate our words into direct action. To train a counselor under conditions which teach him to limit input and expect him to go into the field to practice in an opposite manner, I submit, is highly unrealistic.

The Experimental Tradition

The second assumption under which we operate has its roots in our tradition of controlled scientific inquiry and experimentation. In essence, this tradition states that in order to understand cause and effect we must isolate the subject of study, eliminate all extraneous input, expose our experimental object to a controlled variable and record the outcome. Thus, from our colleagues in the physical sciences we have developed an experimental tradition which is based on the necessity of operating in a closed system. But, even those who work under the most controlled conditions - physicists and chemists for instance - have come to recognize that the very acts of observation and measurement bring about changes in the experimental objects. Our colleagues in the biological sciences also understand the interdependence of living organisms and the environment in which they live. Thus, as one listens to biologists and reads their literature the term "eco-systems" becomes more and more prominant.

For us, then, to bring a human subject into the laboratory setting, isolating him from the arena in which he operates daily, is to forget that people do not behave in a vacuum. This is particularly indefensible for those of us who operate as applied rather than experimental psychologists. It is the business of the applied psychologist to use accumulated knowledge to facilitate human development. We must help human beings make finer and finer differentiations of the forces in their environment so that these new understandings can be organized and integrated into new and more effective ways of behaving, of dealing with and overcoming their life situations. We are, in effect, in the business of assisting individuals to increase the behavioral options open to them.

I, for one, am at a loss to explain how we can assist people to make these finer and finer distinctions under conditions which severely limit out understanding of the environmental forces with which they must deal. The laboratory setting is ill suited to provide us with such understandings since our data is limited to that which is available to our counselee, and by his ability to communicate this to us verbally. When we bring our "subjects" to the laboratory setting what we obtain is a biased sample of behavior. Biased by the remoteness of the setting from this person's usual circumstances; biased by our monochromatic way of interacting which

allows only for verbal encounters; biased by our insistance that the "subject" meet us on our own terms, using rules we have already predetermined; biased by procedures executed in a setting which makes it extremely difficult to develop coordinate working relationships, especially as we meet and work with increasing numbers of inner-city pupils. In short, we insist that our "subjects" meet us on our own "turf", that they play by a set of rules which we have unilaterally determined, and that they they be motivated. To some this might sound as though the counselor were asking the counselee the "pay the piper in advance", or that the services were being performed FOR the counselor rather than BY the counselor. In fact, to an unbiased outside observer it might appear that the total working environment were organized for the counselors comfort. One might suggest that the counselor wants to insure that he be free of unmanageable input so that he need not deal with the confusing barrage of data and information that the counselee, in fact, has to deal with daily.

For training purposes this is one of our rationalle for adopting the laboratory setting. First, so the reasoning goes, we (counselor educators) must carefully control the encounters of our interns while we audit their interactions and responses to determine if they are responding in acceptable ways. In addition to providing carefully controlled and graded encounters for interns, we are concerned that counselees be protected from the possible hurt that may be inflicted upon them by neophyte counselors. First, I am not at all certain that we know enough about what constitutes a meaningful progression of training experiences to indicate that our training practices are optimal. Certainly the literature does not indicate that our present training programs are training counselors as facilitators. (Carkhuff, 1968). In addition, I am convinced that neither counseling interns nor counselees are as fragile as some of our practices would assume. One might wonder, in fact, just who is fragile, counseling intern, counselee, or counselor educator?

The Needs of Counselor Educators

It may be that we could arrive at a better understanding of our present training practices if we examined our own needs as counselor educators as Kell and Mueller (1966) suggest. For those of us who have elected the college and university campus as our base of operations, a setting which can allow us the luxury of remaining sheltered from the currents raging in society, it may be that the laboratory training model is made to order for it lends itself to our direct manipulation and control. (I might add, parenthetically, that such a sheltered existence is becoming less and less possible because our own students are insisting that we get back into what they call "the real world." We may yet be dragged, albeit kicking and screaming into the seventees.) In addition, as individuals who prefer to view the world as ordered and potentially categorizable, the laboratory setting provides us (counselor educators) with a very neat package. By operating in such a circumscribed setting we can keep from becoming involved in the very sticky problems with which the school counselor in the field is faced, problems which do not

lend themselves to easy analysis, classification and solution. Could it be that this isolation from the field accounts, at least in part, for the disparate points of view taken by school counselors as opposed to counselor educators as reported by Arbuckle (1968)?

In addition, we need to consider the possibility that the laboratory training model affords the counselor educator the opportunity to hold on to power and control that he should reasonably be passing on to other hands. It is possible that the supervisory relationship, as translated in the laboratory setting, is more prone to supervisory practices which inhibit the development of counselors able to interact with spontaneity and creativity on the job. In this regard we should carefully consider the warning to supervisors issued by Kell and Mueller (1966, pp. 98, 100) when they write:

> Supervision of others, wherever it may occur, can be a process of control and inhibition without compensating freedom. Or, we maintain, it can be a process which provides needed control and complementary support for exploration, creativity, development, and change. . . .
>
> One primary motivation, expressed in a number of variations, has emerged as most significant to explain such supervisor control. The first of these variations is that the supervisor has needs to believe that the counselor cannot find, even with the supervisors help, personal resources which reside within the counselor. Another supervisor control behavior involves fears that the counselor may, in fact, be effective and perhaps not need the supervisor's help. Or it may be feared that the counselor might be or will become as effective a counselor, perhaps even better, than is the supervisor himself.

Certainly, it is possible for supervisors to act the way Kell and Mueller suggest regardless of the setting they are in. At the very least, however, the complex nature of field settings makes it less possible for supervisors to insist that their interns interact with counselees in ways that the supervisor indicates are most meaningful. At best, we may be able to determine operationally a number of new, creative ways of assisting students through the course of their development.

To recapitulate, for a moment, what does the laboratory training model offer? First, it provides a controlled setting which allows the supervisor to exclude annoying input so that he can concentrate on the counselor-counselee interaction without distraction. Secondly it allows the counselor educator to set the operational ground rules, among which are: insistance that the counselee meet us on our own home ground; that the interaction be a verbal one; and, most importantly, that the counselee be motivated. Finally, it facilitates the maintainance of power and control in the hands of the supervisor.

Although there is no hard evidence to indicate this, I believe that our traditional training practices have certified counseling and guidance practitioners who view themselves as essentially passive individuals,

practitioners who sit in their offices waiting for "motivated clients to seek them out. We have also certified a generation of counselors who are ready to diagnose pathology in every student they see, thus precluding the possibilities of generating hypotheses, for instance, of the school as a pathological social system. This seems like an unreasonable luxury at a time when it is so difficult for developing children to understand, no less deal with, the complex forces operating in our society. At the very time when helping professionals should be actively reaching out to all those who are confused, angry, hurting and distrustful of organized institutions we insist on training counselors to cling to a passive role.

Prior to ending my remarks with a brief description of the counselor training program we are developing at Brooklyn College, let me say a final word regarding our proposal to adopt a field based counselor training model. Since human behavior is an interactional process, we contend that counseling and guidance interns must be presented with an integrated view of human development in much the same way that biologists are beginning to accumulate knowledge through the study of ecological systems. The biologist has come to understand that the preservation of life on this planet depends upon a thorough understanding of the organism-organism, organism-environment interactions that constitute life on this planet. As I have already said, scientific tradition has conditioned us to isolate and observe system fragments. Based on this tradition biologists, for instance, have systematically isolated organisms, organs, tissues and cells for the purposes of their scientific inquiries. At each point of separation, of course, important interaction effects that cannnot be understood on the basis of isolated functioning have been lost. Such inquiries always leave us with incomplete, often incorrect information. The intent here is not to suggest that there is no legitimate reason to study living things in isolation. It is rather to point to the importance of ecological study as a method of obtaining and organizing data from the sub-systems as these relate to the organism interacting in an environment with other living things. Anyone can see the hypocracy of blaming a fish for becoming diseased in the Hudson River. Yet, we do this with terrifying consistency in trying to explain the inability of large numbers of people to "make it" in our society.

I suggest that it is the task of the school counselor, as an applied scientist, to understand and organize the relevant data in such a manner as to provide an integrated view of human development. By organizing our knowledge of the forces which enhance or inhibit human development as these occur in our social institutions, it seems less likely that the counselor will approach individual deficit pejoratively by positing fault in the individual. Exposed to the environment and its stresses in much the same way as the children, parents and teachers with whom he will work, the counselor is more likely to be able to plan developmental and remedial encounters that have a chance of working. He should be able to understand, at least, that what appears to be individual pathology may instead

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be the positive adaptive behavior of the organism to its environment. Based on such understanding the inner-city youth who learns to "hustle" can be understood to be a human being with highly tuned, well developed adaptive mechanisms. Thus, the counselor can posit strength instead of weakness in the individual and assume that by modifying environmental stresses and expectations this highly tuned adaptive mechanism can be helped to develop new behavioral options.

Toward a New Model of Counselor Training

What I propose, therefore, is that we consider adopting a model of counselor training which moves intern and supervisor out into the real world of people and problems, and furthermore, that such experiences become the core of the counselor's training experiences. I propose, in addition, that we structure such training programs to provide maximum freedom for the counselor-in-training to learn and develop in his own way and at his own rate, in a system that responds to HIS needs. This means that we must break away from the lock-step system of offering a progression of courses arbitrarily organized around the intellectual and research interests of the counselor educator. Such a system of education would not only be learner-responsive, but it would also place the responsibility for learning squarely on the shoulders of the learner. Thus, we would view education as liberation rather than as the mere acquisition of knowledge, or the control of human behavior through practices designed to help individuals adjust to their, or our circumstances. Finally, I propose that we present a view of the counselor as interventionist - a practitioner who is able to intervene with individuals, groups and institutions in whatever ways his professional judgement indicates will enhance human development.

Let me now turn to a very brief description of the training program I am suggesting we adopt. I will keep my remarks brief since a more detailed explanation and analysis will appear in a paper now being prepared. This training program, represented schematically in Exhibit A, is a learner-responsive system similar in concept to the ES'70 schools described by David Bushnell (1969) at a recent meeting of The American Management Association. The program is organized into five interdependent, integrated learning centers: a didactic learning module; a field practice and internship module; a supervision module; a planned intervention module; and, a personal development module. Essentially, each of the modules is designed to handle a variety of training issues as indicated below. First and foremost, it is a learner-responsive system which places the responsibility for learning, as previously mentioned, squarely on the learner. Each learning center, therefore, is structured to provide initial directions as well as learning resources - softwear, hardwear and staff experts - to assist the learner in his inquiry. In such a learner-responsive system the learner is given freedom to move in and out of each module as he needs to. A learners progress, in the didactic module at least, is determined by his progression through a series of contracts available for his use, or

set by him in consultation with his supervisor. In addition, it is possible for a learner to enter the system at a level consistent with his previous development and readiness.

The didactic module. The didactic module, as indicated above, is designed to bring the learner into contact with the relevant literature in the field of counseling and related fields. The module is organized around a theme of understanding human development. It is here that the learner is exposed to theoretical structures which attempt to explain human development. The initial task of the supervisor is to assist the learner to develop a plan of studies tied to a contractual obligation. Once accomplished, the supervisor is available to assist the learner in whatever ways are relevant to the learners needs. In addition, the didactic module includes regularly scheduled Integrative Seminars which will focus on pulling together theoretical relationships which, under a more traditional system, are usually organized into separate course structures which, at best, do a poor job of integrating interdisciplinary knowledge.

The planned intervention module. In a similar manner, the planned intervention module will provide a setting in which groups of interns, together with staff experts, will consider a variety of strategies for solving field-related problems. Trainees will be encouraged and assisted to bring a variety of resources - outside experts, community residents, teachers, parents, school administrators, children, theoretical materials - to bear in developing and designing programs to deal with the real problems they encounter in the field. This module would also make it possible to present simulated problems which trainees could practice on both individually and in groups.

The supervision module. The supervision module requires a staff role which is aimed at coordinating and generally providing evaluative feedback of his progress to the learner. The supervisor is also charged with the responsibility of encouraging a state of planfulness and decision making with each learner in his group. In addition, through the supervisory groups each learner will obtain general supervision of his field work. The supervisor, thus, is the one person who works with the intern in each phase of his training, and is, therefore, the one person in the best position to assist the learner in his development.

The field practice and internship module. The field practice and internship module will bring the learner into contact with individuals and groups in a variety of settings. Although the learner will have a school as his base of operations, he will be expected to become knowledgeable at first hand, with any institutions that affect the development of children. The possible range of institutions and individuals with which the learner will be involved will be limited by the creativity and flexibility of both learner and supervisor.

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The personal development module. The personal development module is intended to provide the learner with an opportunity to meet in groups with other learners, without staff supervision, to help him develop his own supervisory skills. As he is ready, each learner will be encouraged to take on a supervisory role in a group of his own peers.

In addition to this supervisory practice, the personal development module will include ongoing sensitivity groups. These groups, led by members of the professional training staff, will include not only learners, but also community residents, parents, teachers, school administrators and students drawn from the field site schools cooperating in the training program.

In conclusion, the proposed training program is designed to bring the learner into active participation and partnership with the training staff in making decisions which affect his learning. It is designed to reinforce an active interventionist approach to the solution of field related problems, as well as to present an integrated view of human development. The learner is encouraged to act independently and to develop unique, creative solutions to field-related problems as he seeks to increase his theoretical understandings of human development and his professional counseling and guidance skills. Finally, our program brings the training staff out into the field with the learner to provide continuing support to his efforts.

APPENDIX G

THE QUESTIONNAIRES USED IN THE FOLLOW-UP STUDY

(PRE-INSTITUTE)

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INSTITUTE NINE

Development of Vocational Guidance and Placement Personnel
for
Metropolitan Areas

Conducted by:
Department of Vocational
Technical Education
State University College
Oswego, New York 13126

Sponsored by:
Division of Vocational Education
College of Education
Temple University
Philadelphia, Pennsylvania 19122

Under U.S.O.E. Grant 9-0535

1. Employee Name _____

2. High School _____

3. Vocational Center Attended _____

4. Vocational Program Taken _____ Year Graduated _____

5. Employment Record (List last employment FIRST) Mo./Yr. Mo./Yr.

a. _____ From _____ To NOW

b. _____ From _____ To _____

c. _____ From _____ To _____

d. _____ From _____ To _____

e. _____ From _____ To _____

INSTRUCTIONS

Following are items related to your employment and training. Please answer ALL items checking (✓) the answer that best describes your opinion. Your answers are STRICTLY CONFIDENTIAL and will NOT be viewed by anyone whom you know personally.

Thank you for your help!

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1. In finding and securing my FIRST position after graduation, the high school principal was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

2. In finding and securing my FIRST position after graduation, the high school vocational director was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

3. In finding and securing my FIRST position after graduation, the high school guidance counselor was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

4. In finding and securing my FIRST position after graduation, my high school vocational teacher was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

5. In finding and securing my FIRST position after graduation, my friends and relatives were of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

6. In finding and securing my PRESENT position, the high school principal was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

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7. In finding and securing my PRESENT position, the high school vocational director was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

8. In finding and securing my PRESENT position, the high school guidance counselor was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

9. In finding and securing my PRESENT position, my high school vocational teacher was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

10. In finding and securing my PRESENT position, the local Employment Service Office was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

11. In finding and securing my PRESENT position, a private employment Agency was of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

12. In finding and securing my PRESENT position, my friends and relatives were of:
   1. No help whatsoever
   2. A little help
   3. Provided some leads
   4. Gave much assistance
   5. Gave considerable assistance

13. When I was making application for my PRESENT job, my present employer indicated that a formal letter of application was:
    1. Not necessary
    2. Sometimes presented
    3. Usually presented
    4. Most often required
    5. Always a part of the application procedure

14. When I was making application for my PRESENT job, my present employer indicated that an application form:
    1. Wasn't necessary in order to be employed
    2. Was seldom completed by those who were later employed
    3. Was usually completed by those who were later employed
    4. Was very often completed in order to receive serious consideration for employment
    5. Was always required and completed

15. During the time that I was being considered for my present job, my employer indicated that:
    1. A personal interview wasn't necessary
    2. They seldom interviewed job applicants
    3. They usually interviewed those applying for employment
    4. They most often considered the personal interview a requirement in the employment procedure
    5. Anyone who is employed here must appear for a personal interview

16. When I was being interviewed for my present job, I received the impression that:
    1. They were not concerned about my past experience
    2. They had very little concern about my previous work and what I had done
    3. They were somewhat interested when they inquired about previous experience
    4. They were quite interested in my previous work experience
    5. They were very highly interested in my previous work experience and my skills

17. When I was being considered for my present job, I received the impression that:
    1. Letters of recommendation were not necessary
    2. Letters of recommendation were used occasionally
    3. Letters of recommendation were usually presented
    4. Letters of recommendation were often presented as evidence of past workmanship
    5. Letters of recommendation were required in order to secure consideration for employment

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18. When I was being considered for my present job, I received the impression that my company:
    1. Doesn't use objective written tests when screening prospective employees
    2. Very seldom will use objective written tests when selecting new employees
    3. Will sometimes use objective written tests to screen applicants for employment
    4. Usually uses some kind of objective written testing procedure when screening prospective employees
    5. Has objective written tests which must be completed in order for an applicant to be considered for employment

19. When I was being considered for my present job, I received the impression that my company:
    1. Never uses a practical manipulative type test when screening job applicants
    2. Occasionally uses a practical manipulative exam when screening job applicants
    3. Will usually use a manipulative exam when screening job applicants
    4. Often uses a manipulative exam when screening applicants for jobs such as mine
    5. Always uses a manipulative exam when screening applicants for the kind of job which I have

20. Now that I have been working here awhile, I have the impression that:
    1. I was poorly prepared when I was first employed as compared to most of the men who are doing this kind of work
    2. I was fairly well prepared when I first came as some of the men who work here
    3. I was about as well prepared when I first started here as the average
    4. I was above average in my preparation when I first started working here
    5. I was exceptionally well prepared because of my past experience and training for the work that I'm doing here

21. Now that I have some experience, I feel that my vocational instructors in school were:
    1. Poorly prepared as teachers
    2. Somewhat inadequately prepared
    3. About average as teachers
    4. Above average as teachers
    5. Exceptionally well prepared as teachers

22. As a result of my several years of work experience, I now have:
    1. No respect for what my vocational teachers included in our courses in school
    2. Little respect for what was included in the course work
    3. Some respect for the things which my vocational instructors were attempting to explain to us
    4. A better understanding of what my vocational instructors were trying to emphasize
    5. Gained considerable understanding of the reasons for certain courses and their content

23. As I remember the equipment which we had in our school shop (or lab), I realize that it was:
    1. Completely inadequate for the kind of instruction that was being attempted
    2. Fairly adequate
    3. About the average of that used in the industry or business
    4. Very adequate although small
    5. Up-to-date and of comparable size and quality to that used in the industry or business

24. As I think about my high school vocational program, I realize that:
    1. It had nothing of a practical nature to offer that related to the real world of work
    2. It had very little of a practical nature to offer that related to the real world of work
    3. It was an average program that had some relation to the real world of work
    4. It was a good program that offered many advantages and was very well related to the real world of work
    5. It was an excellent program and was well presented by instructors who could speak from practical experience in the real world of work

25. When I was being interviewed for this job, I had the impression that:
    1. I wasn't really needed
    2. My chances of getting the job weren't too good
    3. Young people with my experience and training were usually able to get jobs here
    4. There was a definite possibility that I might get the job
    5. I was definitely going to get the job and that my experience, background and training were exactly what they wanted

26. When I was employed on this job, the system of selection:
    1. Made no sense at all
    2. Made little sense in that it was not organized
    3. Made some sense in that it had some order even if it was not complete
    4. Was good in that the criteria for selection was related to the job
    5. Was excellent because it was fair and covered all criteria related to the job and employment practices

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27. Although I haven't worked a great many places, I have gone for quite a few interviews and I have the impression that:
    1. It really doesn't matter how you dress when you apply for work
    2. In most cases it doesn't pay to clean up and shave and put on a clean shirt
    3. Usually the employment manager expects you to be dressed up in street clothes
    4. In most cases it is best to dress up
    5. It always pays to have a good haircut, to be clean shaven, and to wear your best clothes with a tie

28. When I was employed, I was told to go to a company doctor for a physical and I had the feeling that:
    1. The company felt that the exam was a waste of time and not really necessary
    2. The exam was superficially done and had a very slight relationship to employment
    3. The exam was done completely enough to meet safety and health standards
    4. The exam was thoroughly done, in order to match the employee with the appropriate job
    5. The exam was very complete because it seemed that the company was deeply concerned about its employees and their welfare

29. When I was first employed here, the company management sent me to classes for orientation.
    1. These were a complete waste of time in that they seemed of no value or relationship to the job
    2. Much time and money was spent telling us about the company, but they seemed to have a very slight relationship to the job
    3. These classes were usually interesting and seemed to have some value and relationship to the job
    4. The personnel who presented the orientation seemed very well prepared and the material presented had much value and relationship to the job
    5. This orientation program has considerable value and knowing more about your company and the product makes the job more rewarding

30. Since I've been working here, I've had to attend classes where I've learned more about using our equipment and machines. I have the feeling that:
    1. These classes are a waste of time and have no job related value
    2. The classes have little job related value
    3. These classes are usually interesting and have some job related value
    4. What I learn in these classes is rather important and has much job related value
    5. These classes can be very important to me in terms of future advancement on the job and one of considerable value

801 107

31. I often think about the school where I used to go, and I remember my vocational classes. It seems to me that:
    1. They did a poor job in getting us ready to go to work
    2. Our teachers talked a lot about working conditions but they did little about developing attitudes
    3. Our teachers usually were regular guys and they did quite a lot to make us understand how it is out here
    4. Our teachers were well schooled in the world of work and their influence has made it much easier for us
    5. Our teachers were particularly able at relating the importance of a good attitude toward work. I'm very grateful to them

32. When I think back to one of the times I went to see my counselor when I was a 9th grader and I asked questions about working here - I can still remember:
    1. That he had no information for me
    2. That he had little information about the company
    3. That he had some information and that it was probably a pretty good place to work
    4. That he had much information and suggested I should probably find someone who worked here and talk to him about it
    5. He had considerable information and arranged to have me meet one of the vocational teachers who used to work here to tell me about it

33. In regard to my relationship with my co-workers, I feel that:
    1. I am never able to talk with or understand them
    2. I am sometimes able to talk with or understand them
    3. I am usually able to talk with or understand them
    4. I am quite often able to talk with or understand them
    5. I am always able to talk with or understand them

34. In regard to my relationship with my foreman (or supervisor), I feel that:
    1. I am never able to talk with or understand him
    2. I am sometimes able to talk with or understand him
    3. I am usually able to talk with or understand him
    4. I am quite often able to talk with or understand him
    5. I am always able to talk with or understand him

35. In regard to my writing reports or other written communications required for my job, I feel that:
    1. I am unable to write so as to be understood
    2. I am sometimes able to write so as to be understood
    3. I am usually able to write so as to be understood
    4. I am quite often able to write so as to be understood
    5. I am always able to write so as to be understood

36. In regard to job related problems and working independently, I feel that:
    1. I am never able to arrive at a solution and proceed alone
    2. I am seldom able to arrive at a solution and proceed alone
    3. I am usually able to arrive at a solution and proceed alone
    4. I am often able to arrive at a solution and proceed alone
    5. I am always able to arrive at a solution and proceed alone

37. In regard to opportunities for advancement, either promotions or salary, I feel that my company offers:
    1. No opportunities whatsoever
    2. A few opportunities
    3. The usual opportunities to qualified people
    4. Many opportunities in many areas
    5. Equal opportunities to all personnel

(SUPV-2)

INSTITUTE NINE

Development of Vocational Guidance and Placement

Personnel for Metropolitan Areas

Conducted by:

Department of Vocational
Technical Education
State University of New York
College of Arts and Science
Oswego, New York 13126

Sponsored by:

Division of Vocational Education
College of Education
Temple University
Philadelphia, Pennsylvania 19122

Under U.S.O.E. Grant 9-0535

1. Employer (Company) _____

2. Immediate Supervisor doing evaluation _____

3. Employee being evaluated _____

4. Occupational Field _____

5. Date _____

INSTRUCTIONS

Following are items about a specific employee as related to your and the Company's association with him (her). Please answer ALL items by checking (✔) the answer that best describes your opinion. Your answers are STRICTLY CONFIDENTIAL and will NOT be reviewed by anyone whom you know personally.

Thank You For Your Help!

1. Does the employee exhibit the necessary manual skills for success in the occupation?
   1. Never 2. Occasionally 3. Usually 4. Often 5. Always

2. Does the employee exhibit ability to apply the necessary science for success in the occupation?
   1. Never 2. Occasionally 3. Usually 4. Often 5. Always

3. Does the employee exhibit ability to apply the necessary mathematics for success in the occupation?
   1. Never 2. Occasionally 3. Usually 4. Often 5. Always

4. Does the employee exhibit the ability to operate the machines and/or equipment necessary for success in the occupation?
   1. Never 2. Occasionally 3. Usually 4. Often 5. Always

5. Does the employee exhibit the ability to understand the necessary drawings for success in the occupation?
   1. Never 2. Occasionally 3. Usually 4. Often 5. Always

6. Does the employee exhibit the ability to understand the necessary written instructions for success in the occupation?
   1. Never 2. Occasionally 3. Usually 4. Often 5. Always

7. Does the employee exhibit the ability to understand the necessary oral instructions for success in the occupation?
   1. Never 2. Occasionally 3. Usually 4. Often 5. Always

8. Does the employee exhibit an ability to communicate and associate with his co-workers?
   1. Never 2. Occasionally 3. Usually 4. Often 5. Always

9. Do his co-workers exhibit an acceptance of the employee as an associate and individual?
   1. Never 2. Occasionally 3. Usually 4. Often 5. Always

10. Does the employee exhibit the ability to accept and comply with directions from a supervisor or foreman?
    1. Never 2. Occasionally 3. Usually 4. Often 5. Always

11. Does the employee exhibit desirable safety habits?
    1. Never 2. Occasionally 3. Usually 4. Often 5. Always

12. Does the employee seek assistance when necessary?
    1. Never 2. Occasionally 3. Usually 4. Often 5. Always

13. Does the employee exhibit loyalty to the firm?
    1. Never 2. Occasionally 3. Usually 4. Often 5. Always

14. Does the employee exhibit honesty and integrity?
    1. Never 2. Occasionally 3. Usually 4. Often 5. Always

15. Does the employee exhibit interest in all facets of his work?
1. Never 2. Occasionally 3. Usually 4. Often 5. Always

16. Does the employee exhibit pride in doing good work?
1. Never 2. Occasionally 3. Usually 4. Often 5. Always

17. Does the employee accept and comply with company rules and policy?
1. Never 2. Occasionally 3. Usually 4. Often 5. Always

18. Does the employee understand employee benefits?
1. Never 2. Occasionally 3. Usually 4. Often 5. Always

19. Is the employee inclined to seek further training or advancement?
1. Never 2. Occasionally 3. Usually 4. Often 5. Always

20. Does the employee seem as well prepared as most employees for this occupation?
1. Never 2. Occasionally 3. Usually 4. Often 5. Always

21. In hiring the employee, how much value did you place on the contacts made by the principal of his school?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

22. In hiring the employee, how much value did you place on the contacts made by the teacher of his school?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

23. In hiring the employee, how much value did you place on the contacts made by the director of vocational education in his school?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

24. In hiring the employee, how much value did you place on the contacts made by any of the counselors?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

25. Do you place much value on a letter of application in your hiring practices?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

26. Do you place much value on a properly filled application form in your hiring practices?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

27. Do you place much value on an interview in your hiring process?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

28. Do you place much value on the applicant's training experience in your hiring practices?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

29. Do you place much value on a physical exam in hiring practices?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

30. In hiring the employee, how much value did you place on the contacts made by the local Employment Service Office
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

31. In hiring the employee, how much value did you place on contacts made by a private employment agency?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

32. In hiring the employee, how much value did you place on contacts by friends, relatives and other employers?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

33. What emphasis is placed on a written exam in your hiring practices?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

34. What emphasis is placed on a practical exam in your hiring practices?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

35. Does the employee exhibit the ability to communicate with his co-workers?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

36. Does the employee exhibit the ability to communicate with you or other supervisors?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

37. Does the employee exhibit the ability to write reports or other written communications satisfactorily as required by the occupation?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

38. Does the employee exhibit ability to solve occupational problems and proceed without assistance?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

39. If the occasion arose would you select the employee to take on a more responsible role?
1. Never 2. Seldom 3. Considered 4. Quite often 5. Always

40. Do you place much value on letters of recommendation in your hiring practices?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

41. Do you place much value on former work experience in your hiring practices?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

42. Does your company conduct and place much value on orientation classes?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

43. Does your company conduct or place much value on advanced training classes for employees?
1. None at all 2. A little 3. Some 4. Very much 5. Considerable

APPENDIX H

STATISTICAL DATA GENERATED FROM AN ANALYSIS

OF THE REQUIRED FOLLOW-UP STUDY

PRE-INSTITUTE

COMPUTER CODE NUMBERS

001	Chrisensen
002	Glasco
003	Payne
004	Rummell
005	Hunter
006	(Maryland)
007	Carpenter
008	(Pittsburgh)
009	(Norfolk)
010	(Pittsburgh)
011	(Oshkosh)
012	Miller
013	Bolden
014	Murocci
015	Cannon
016	Muroon
017	Post
018	Garrison
019	Moss
020	Champion & Byrne
021	Johnson
022	Tipton
023	Tyler
024	Cook
025	Jenkins
026	Huttenga
027	Barr
028	(Connecticut)
029	(Fort Wayne)

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
EMPLOYER TOTAL DATA
PAGE 1.

1 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	4	13	13	29	0	0	0	0	0	60
LOWER	1	1	8	21	26	0	0	0	0	2	59
TOTAL	2	5	21	34	55	0	0	0	0	2	
PERCENT	1	4	17	28	46	0	0	0	0	1	

2 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	2	21	21	24	0	0	0	0	1	60
LOWER	2	1	17	24	12	0	0	0	0	3	59
TOTAL	3	3	38	45	26	0	0	0	0	4	
PERCENT	2	2	31	37	21	0	0	0	0	3	

3 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	8	17	16	17	0	0	0	0	1	60
LOWER	2	2	13	21	17	0	0	0	0	4	59
TOTAL	3	10	30	37	34	0	0	0	0	5	
PERCENT	2	8	25	31	28	0	0	0	0	4	

4 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	3	9	14	32	0	0	0	0	1	60
LOWER	1	1	3	13	37	0	0	0	0	4	59
TOTAL	2	4	12	27	69	0	0	0	0	5	
PERCENT	1	3	10	22	57	0	0	0	0	4	

5 OPTIONS =	1	2	3	4	5	0	0	0	0	* OMIT	TOTAL
UPPER	1	3	21	12	17	0	0	0	0	6	60
LOWER	1	3	14	25	12	0	0	0	0	4	59
TOTAL	2	6	35	37	29	0	0	0	0	10	
PERCENT	1	5	29	31	24	0	0	0	0	8	

6 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	1	3	17	15	24	0	0	0	0	0	60
LOWER	1	1	12	25	17	0	0	0	0	3	59
TOTAL	2	4	29	40	41	0	0	0	0	3	
PERCENT	1	3	24	33	34	0	0	0	0	2	

7 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	1	18	15	25	0	0	0	0	0	60
LOWER	1	0	10	22	22	0	0	0	0	4	59
TOTAL	2	1	28	37	47	0	0	0	0	4	
PERCENT	1	0	23	31	39	0	0	0	0	3	

8 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	2	12	15	30	0	0	0	0	3	59
LOWER	1	5	7	20	23	0	0	0	0	3	
TOTAL	2	7	19	35	53	0	0	0	0	2	
PERCENT	1	5	15	29	44	0	0	0	0	2	

9 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	10	18	30	0	0	0	0	1	60
LOWER	1	3	9	16	28	0	0	0	0	2	59
TOTAL	1	4	19	34	58	0	0	0	0	3	
PERCENT	0	3	15	28	48	0	0	0	0	2	

10 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	1	11	17	30	0	0	0	0	0	60
LOWER	1	2	8	19	25	0	0	0	0	4	59
TOTAL	2	3	19	36	55	0	0	0	0	4	
PERCENT	1	2	15	30	46	0	0	0	0	3	

11 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	0	14	17	28	0	0	0	0	0	60
LOWER	1	1	16	13	25	0	0	0	0	3	
TOTAL	2	1	30	53	0	0	0	0	0	3	
PERCENT	1	0	25	25	44	0	0	0	0	2	

12 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	3	19	19	19	0	0	0	0	0	60
LOWER	1	5	15	14	21	0	0	0	0	3	59
TOTAL	1	8	34	33	40	0	0	0	0	3	
PERCENT	0	6	28	27	33	0	0	0	0	2	

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
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PAGE 3.

13 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	2	14	9	34	0	0	0	0	0	60
LOWER	1	0	12	15	27	0	0	0	0	4	59
TOTAL	2	2	26	24	62	0	0	0	0	4	
PERCENT	1	1	21	20	51	0	0	0	0	3	

14 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	4	12	43	0	0	0	0	1	60
LOWER	0	0	7	7	42	0	0	0	0	3	59
TOTAL	0	0	11	19	85	0	0	0	0	4	
PERCENT	0	0	9	15	71	0	0	0	0	3	

15 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	3	23	12	21	0	0	0	0	1	60
LOWER	2	4	9	19	22	0	0	0	0	3	59
TOTAL	2	7	32	31	43	0	0	0	0	4	
PERCENT	1	5	26	26	36	0	0	0	0	3	

16 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	4	12	15	29	0	0	0	0	0	60
LOWER	0	1	13	19	23	0	0	0	0	3	59
TOTAL	0	5	25	34	52	0	0	0	0	3	
PERCENT	0	4	21	28	43	0	0	0	0	2	

17 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	0	11	18	30	0	0	0	0	0	60
LOWER	0	3	9	18	27	0	0	0	0	2	59
TOTAL	1	3	20	36	57	0	0	0	0	2	
PERCENT	0	2	16	30	47	0	0	0	0	1	

18 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	1	18	15	23	0	0	0	0	1	60
LOWER	0	1	17	20	18	0	0	0	0	3	59
TOTAL	2	2	35	35	41	0	0	0	0	4	
PERCENT	1	1	29	29	34	0	0	0	0	3	

19 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	3	14	12	14	14	0	0	0	0	3	60
LOWER	1	13	13	14	15	0	0	0	0	3	59
TOTAL	4	27	25	28	29	0	0	0	0	6	
PERCENT	3	22	21	23	24	0	0	0	0	5	

20 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	4	17	15	23	0	0	0	0	1	60
LOWER	1	2	15	15	23	0	0	0	0	3	59
TOTAL	1	6	32	30	46	0	0	0	0	4	
PERCENT	0	5	26	25	38	0	0	0	0	3	

21 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	30	2	9	7	5	0	0	0	0	7	60
LOWER	19	5	9	9	9	9	0	0	0	8	59
TOTAL	49	7	18	16	14	0	0	0	0	15	
PERCENT	41	5	15	13	11	0	0	0	0	12	

22 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	25	2	7	12	7	0	0	0	0	7	60
LOWER	15	5	12	16	4	0	0	0	0	7	59
TOTAL	40	7	19	28	11	0	0	0	0	14	
PERCENT	33	5	15	23	9	0	0	0	0	11	

23 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	28	3	8	5	11	0	0	0	0	5	60
LOWER	17	3	9	14	8	0	0	0	0	8	59
TOTAL	45	6	17	19	19	0	0	0	0	13	
PERCENT	37	5	14	15	15	0	0	0	0	10	

24 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	23	3	17	5	8	0	0	0	0	4	60
LOWER	19	4	12	10	6	0	0	0	0	8	59
TOTAL	42	7	29	15	14	0	0	0	0	12	
PERCENT	35	5	24	12	11	0	0	0	0	10	

											*	
25	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	7	7	26	6	9	0	0	0	0	5	60
	LOWER	6	4	25	9	9	0	0	0	0	6	59
	TOTAL	13	11	51	15	18	0	0	0	0	11	
	PERCENT	10	9	42	12	15	0	0	0	0	9	

											*	
26	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	4	3	13	20	16	0	0	0	0	4	60
	LOWER	3	1	11	20	19	0	0	0	0	5	59
	TOTAL	7	4	24	40	35	0	0	0	0	9	
	PERCENT	5	3	20	33	29	0	0	0	0	7	

											*	
27	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	1	4	20	32	0	0	0	0	3	60
	LOWER	0	0	2	16	35	0	0	0	0	6	59
	TOTAL	0	1	6	36	67	0	0	0	0	9	
	PERCENT	0	0	5	30	56	0	0	0	0	7	

											*	
28	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	1	0	9	23	23	0	0	0	0	4	60
	LOWER	1	1	11	25	17	0	0	0	0	4	59
	TOTAL	2	1	20	48	40	0	0	0	0	8	
	PERCENT	1	0	16	40	33	0	0	0	0	6	

											*	
29	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	9	8	9	15	14	0	0	0	0	5	60
	LOWER	7	6	14	18	10	0	0	0	0	4	59
	TOTAL	16	14	23	33	24	0	0	0	0	9	
	PERCENT	13	11	19	27	20	0	0	0	0	7	

											*	
30	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	36	5	8	1	2	0	0	0	0	8	60
	LOWER	25	3	13	7	3	0	0	0	0	8	59
	TOTAL	61	8	21	8	5	0	0	0	0	16	
	PERCENT	51	6	17	6	4	0	0	0	0	13	

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31 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	39	2	5	2	2	0	0	0	0	10	60
LOWER	37	3	6	2	3	0	0	0	0	8	59
TOTAL	76	5	11	4	5	0	0	0	0	18	
PERCENT	63	4	9	3	4	0	0	0	0	15	

32 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	18	8	13	12	6	0	0	0	0	3	60
LOWER	10	9	16	10	5	0	0	0	0	9	59
TOTAL	28	17	29	22	11	0	0	0	0	12	
PERCENT	23	14	24	28	9	0	0	0	0	10	

33 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	20	3	12	5	16	0	0	0	0	4	60
LOWER	10	4	16	7	16	0	0	0	0	6	59
TOTAL	30	7	28	12	32	0	0	0	0	10	
PERCENT	25	5	23	10	26	0	0	0	0	8	

34 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	17	5	10	13	12	0	0	0	0	3	60
LOWER	9	5	10	20	7	0	0	0	0	8	59
TOTAL	26	10	20	33	19	0	0	0	0	11	
PERCENT	21	8	16	27	15	0	0	0	0	9	

35 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	11	21	27	0	0	0	0	1	60
LOWER	0	3	2	33	16	0	0	0	0	5	59
TOTAL	0	3	13	54	43	0	0	0	0	6	
PERCENT	0	2	10	45	36	0	0	0	0	5	

36 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	14	23	19	0	0	0	0	3	60
LOWER	0	1	8	28	18	0	0	0	0	4	59
TOTAL	0	2	22	51	37	0	0	0	0	7	
PERCENT	0	1	81	42	31	0	0	0	0	5	

37 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	4	20	19	15	0	0	0	0	2	60
LOWER	1	5	15	27	8	0	0	0	0	3	59
TOTAL	1	9	35	46	23	0	0	0	0	5	
PERCENT	0	7	29	38	19	0	0	0	0	4	

38 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	5	21	18	12	0	0	0	0	3	60
LOWER	1	4	16	29	5	0	0	0	0	4	59
TOTAL	2	9	37	47	17	0	0	0	0	7	
PERCENT	1	7	31	39	14	0	0	0	0	5	

39 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	5	22	16	15	0	0	0	0	2	60
LOWER	3	0	18	23	11	0	0	0	0	4	59
TOTAL	3	5	40	39	26	0	0	0	0	6	
PERCENT	2	4	33	32	21	0	0	0	0	5	

40 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	14	23	14	3	0	0	0	0	5	60
LOWER	4	6	25	11	5	0	0	0	0	8	59
TOTAL	5	20	48	25	8	0	0	0	0	13	
PERCENT	4	16	40	21	6	0	0	0	0	10	

The evaluation instruments which follow were used by all ten of the multiple Institutes and were employed as pre and post. The instruments were provided by Temple University but each cooperating institution was able to make it's own analysis of the results.

APPENDIX I

EVALUATION INSTRUMENTS

(PRE AND POST)

ERIC 124

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
EMPLOYEE TOTAL DATA
PAGE 1.

1 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	42	5	4	2	5	0	0	0	0	2	60
LOWER	44	4	3	5	3	0	0	0	0	0	59
TOTAL	86	9	7	7	8	0	0	0	0	2	
PERCENT	72	7	5	5	6	0	0	0	0	1	

2 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	32	4	7	7	8	0	0	0	0	2	60
LOWER	30	0	8	6	15	0	0	0	0	0	59
TOTAL	62	4	15	13	23	0	0	0	0	2	
PERCENT	52	3	12	10	19	0	0	0	0	1	

3 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	26	13	9	6	4	0	0	0	0	2	60
LOWER	34	5	9	3	8	0	0	0	0	0	59
TOTAL	60	18	18	9	12	0	0	0	0	2	
PERCENT	50	15	15	7	10	0	0	0	0	1	

4 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	23	7	5	10	11	0	0	0	0	4	60
LOWER	27	3	5	8	16	0	0	0	0	0	59
TOTAL	50	10	10	18	27	0	0	0	0	4	
PERCENT	42	8	8	15	22	0	0	0	0	3	

5 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	25	11	11	5	6	0	0	0	0	2	60
LOWER	17	7	12	14	9	0	0	0	0	0	59
TOTAL	42	18	23	19	15	0	0	0	0	2	
PERCENT	35	15	19	15	12	0	0	0	0	1	

6 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	48	3	2	3	4	0	0	0	0	0	60
LOWER	50	4	1	2	2	0	0	0	0	0	59
TOTAL	98	7	3	5	6	0	0	0	0	0	
PERCENT	82	5	2	4	5	0	0	0	0	0	

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
EMPLOYEE TOTAL DATA

7 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	40	2	5	8	4	0	0	0	0	1	60
LOWER	35	4	4	8	8	0	0	0	0	0	59
TOTAL	75	6	9	16	12	0	0	0	0	1	
PERCENT	63	5	7	13	10	0	0	0	0	0	

8 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	37	10	3	5	5	0	0	0	0	0	60
LOWER	44	1	7	4	3	0	0	0	0	0	59
TOTAL	81	11	10	9	8	0	0	0	0	0	
PERCENT	68	9	8	7	6	0	0	0	0	0	

9 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	31	4	4	13	7	0	0	0	0	1	60
LOWER	34	3	2	7	11	0	0	0	0	2	59
TOTAL	54	5	5	20	18	0	0	0	0	3	
PERCENT	54	5	5	16	15	0	0	0	0	2	

10 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	53	2	0	2	3	0	0	0	0	0	60
LOWER	46	3	3	1	5	0	0	0	0	1	59
TOTAL	99	5	3	3	8	0	0	0	0	1	
PERCENT	83	4	2	2	6	0	0	0	0	0	

11 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	54	1	1	0	3	0	0	0	0	1	60
LOWER	51	0	2	1	4	0	0	0	0	1	59
TOTAL	105	1	3	1	7	0	0	0	0	1	
PERCENT	88	0	2	0	5	0	0	0	0	1	

12 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	29	14	5	3	9	0	0	0	0	0	60
LOWER	21	6	11	13	7	0	0	0	0	1	59
TOTAL	50	20	16	16	16	0	0	0	0	1	
PERCENT	42	16	13	13	13	0	0	0	0	0	

13 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	40	1	2	3	13	0	0	0	0	1	60
LOWER	40	4	1	2	10	0	0	0	0	2	59
TOTAL	80	5	3	5	23	0	0	0	0	3	
PERCENT	67	4	2	4	19	0	0	0	0	2	

14 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	11	0	2	5	41	0	0	0	0	1	60
LOWER	6	1	0	7	43	0	0	0	0	2	59
TOTAL	17	1	2	12	84	0	0	0	0	3	
PERCENT	14	0	1	10	70	0	0	0	0	2	

15 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	1	7	7	42	0	0	0	0	1	60
LOWER	6	0	5	9	38	0	0	0	0	1	59
TOTAL	8	1	12	16	80	0	0	0	0	2	
PERCENT	6	0	10	13	67	0	0	0	0	1	

16 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	7	7	11	27	0	0	0	0	2	60
LOWER	3	2	9	13	31	0	0	0	0	1	59
TOTAL	9	9	16	24	58	0	0	0	0	3	
PERCENT	7	7	13	20	48	0	0	0	0	2	

17 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	31	11	6	2	7	0	0	0	0	3	60
LOWER	36	7	5	3	8	0	0	0	0	0	59
TOTAL	67	18	11	5	15	0	0	0	0	3	
PERCENT	56	15	9	4	12	0	0	0	0	2	

18 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	28	2	6	6	17	0	0	0	0	1	60
LOWER	20	3	4	5	26	0	0	0	0	1	59
TOTAL	48	5	10	11	43	0	0	0	0	2	
PERCENT	40	4	8	9	36	0	0	0	0	1	

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COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
EMPLOYEE TOTAL DATA

19 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	29	5	6	5	13	0	0	0	0	2	60
LOWER	23	3	8	2	22	0	0	0	0	1	59
TOTAL	52	8	14	7	35	0	0	0	0	3	
PERCENT	43	6	11	5	29	0	0	0	0	2.	

20 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	11	22	15	5	0	0	0	0	2	60
LOWER	6	9	27	8	9	0	0	0	0	0	59
TOTAL	11	20	49	23	14	0	0	0	0	2	
PERCENT	9	16	41	19	11	0	0	0	0	1	

21 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	3	4	19	9	23	0	0	0	0	2	60
LOWER	1	8	20	9	18	0	0	0	0	3	59
TOTAL	4	12	39	18	41	0	0	0	0	5	
PERCENT	3	10	32	15	34	0	0	0	0	4	

22 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	2	11	21	23	0	0	0	0	2	60
LOWER	3	1	8	21	24	0	0	0	0	2	59
TOTAL	4	3	19	42	47	0	0	0	0	4	
PERCENT	3	2	15	35	39	0	0	0	0	3	

23 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	15	14	6	22	0	0	0	0	1	60
LOWER	6	17	8	6	19	0	0	0	0	3	59
TOTAL	8	32	22	12	41	0	0	0	0	4	
PERCENT	6	26	18	10	34	0	0	0	0	3	

24 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	2	13	22	19	0	0	0	0	0	60
LOWER	6	3	14	20	13	0	0	0	0	3	59
TOTAL	10	5	27	42	32	0	0	0	0	3	
PERCENT	8	4	22	35	26	0	0	0	0	2	

25 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	3	12	27	15	0	0	0	0	1	60
LOWER	2	7	7	30	13	0	0	0	0	0	59
TOTAL	4	10	19	57	28	0	0	0	0	1	
PERCENT	3	8	15	47	23	0	0	0	0	0	

26 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	2	11	30	13	0	0	0	0	3	60
LOWER	3	2	9	24	20	0	0	0	0	1	59
TOTAL	4	4	20	54	33	0	0	0	0	4	
PERCENT	3	3	16	45	27	0	0	0	0	3	

27 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	4	13	42	0	0	0	0	1	60
LOWER	1	0	6	11	40	0	0	0	0	1	59
TOTAL	1	0	10	24	82	0	0	0	0	2	
PERCENT	0	0	8	20	68	0	0	0	0	1	

28 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	4	22	3	18	0	0	0	0	11	60
LOWER	6	4	20	6	20	0	0	0	0	3	59
TOTAL	8	8	42	9	38	0	0	0	0	14	
PERCENT	6	6	35	7	31	0	0	0	0	11	

29 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	4	9	6	19	0	0	0	0	18	60
LOWER	3	2	5	11	14	0	0	0	0	24	59
TOTAL	7	6	14	17	33	0	0	0	0	42	
PERCENT	5	5	11	14	27	0	0	0	0	35	

30 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	5	6	10	19	0	0	0	0	16	60
LOWER	3	2	12	7	18	0	0	0	0	17	59
TOTAL	7	7	18	17	37	0	0	0	0	33	
PERCENT	5	5	15	14	31	0	0	0	0	27	

31 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	7	10	11	27	0	0	0	0	0	60
LOWER	8	4	13	11	29	0	0	0	0	4	59
TOTAL	13	11	23	22	46	0	0	0	0	4	
PERCENT	10	9	19	18	38	0	0	0	0	3	

32 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	15	3	9	8	1	0	0	0	0	24	60
LOWER	15	4	6	5	4	0	0	0	0	25	59
TOTAL	30	7	15	13	5	0	0	0	0	49	
PERCENT	25	5	12	10	4	0	0	0	0	41	

33 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	2	3	23	29	0	0	0	0	2	60
LOWER	1	3	10	13	32	0	0	0	0	0	59
TOTAL	2	5	13	36	61	0	0	0	0	2	
PERCENT	1	4	10	30	51	0	0	0	0	1	

34 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	2	11	10	33	0	0	0	0	2	60
LOWER	1	5	8	14	29	0	0	0	0	2	59
TOTAL	3	7	19	24	62	0	0	0	0	4	
PERCENT	2	5	15	20	52	0	0	0	0	3	

35 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	5	17	18	15	0	0	0	0	4	60
LOWER	3	1	16	16	17	0	0	0	0	6	59
TOTAL	4	6	33	34	32	0	0	0	0	10	
PERCENT	3	5	27	28	26	0	0	0	0	8	

36 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	0	19	28	8	0	0	0	0	4	60
LOWER	1	1	19	25	12	0	0	0	0	1	59
TOTAL	2	1	38	53	20	0	0	0	0	5	
PERCENT	1	0	31	44	16	0	0	0	0	4	

37 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	10	14	12	19	0	0	0	0	3	60
LOWER	3	4	19	8	24	0	0	0	0	1	59
TOTAL	5	14	33	20	43	0	0	0	0	4	
PERCENT	4	11	27	16	36	0	0	0	0	3	

EMPLOYEE	EMPLOYER	AVE DIFF.	SD DIFF.
0110041	0110042	0.61	0.89
0110051	0110052	0.55	0.68
0120011	0120012	0.77	1.03
0120021	0120022	1.44	0.95
0130011	0130012	1.27	1.36
0130021	0130022	1.11	1.14
0130031	0130032	1.88	1.76
0130041	0130042	0.38	0.95
0130051	0130052	1.72	1.69
0140011	0140012	1.11	1.24
1050011	0150012	1.38	1.25
0150021	0150022	1.44	1.67
0150031	0150032	0.77	0.91
0150041	0150042	1.61	1.29
0160021	0160022	1.22	0.91
0160031	0160032	1.66	1.05
0160041	0160042	1.44	1.06
0160051	0160052	1.05	0.97
0170011	0170012	1.44	0.83
0170021	0170022	1.05	1.12
1070031	0170032	1.16	1.25
0170041	0170042	1.27	1.36
0180011	0180012	1.16	1.11
0180021	0180022	1.22	1.18
0180031	0180032	0.38	0.59
0180041	0180042	0.94	1.26
0190011	0190012	1.11	1.24
0190021	0190022	2.00	1.49
0190031	0190032	2.16	1.42
0190041	0190042	2.11	1.72
0190051	0190052	1.22	0.78
0190061	0190062	1.61	1.16
0190071	0190072	1.61	1.00
0190081	0190082	1.44	1.42
0200011	020C012	1.61	0.89
0200031	0200032	1.77	1.31
0200041	0200042	1.11	0.93
0200051	0200052	1.66	0.94
0200071	0200072	1.50	1.16
0210011	0210012	1.61	1.37
0210021	0210022	0.83	1.30

EMPLOYEE	EMPLOYER	AVE DIFF.	SD DIFF.
0040011	0040012	1.55	1.64
0040021	0040022	1.11	0.73
0040031	0040032	1.83	1.16
0040041	0040042	1.50	1.42
0040051	0040052	1.22	1.27
0050011	0050012	0.72	0.86
0050021	0050022	1.22	0.97
0050031	0050032	1.33	1.29
0050041	0050042	1.11	0.99
0050051	0050052	1.27	1.23
0050061	0050062	1.50	1.06
0060021	0060022	1.44	1.25
0060031	0060032	1.11	1.28
0060041	0060042	1.36	1.29
0060051	0060052	2.72	1.87
0070011	0070012	1.00	1.05
0070021	0070022	1.77	1.27
0070031	0070032	1.05	1.35
0070041	0070042	1.27	0.93
0080011	0080012	2.55	2.03
0080021	0080022	1.77	1.39
0080031	0080032	1.16	0.89
0080041	0080042	1.05	0.91
0090011	0090012	1.22	1.22
0100011	0100012	0.83	1.01
0100021	0100022	1.55	1.25
0100031	0100032	1.27	0.80
0100041	0100042	2.38	1.70
0110011	0110012	0.50	0.68
0110021	0110022	0.61	0.59
0110031	0110032	0.72	0.73

EMPLOYEE	EMPLOYER	AVE DIFF.	SD DIFF.
0210031	0210032	0.88	0.93
0210041	0210042	1.77	1.78
0210051	0210052	1.94	1.35
0220011	0220012	2.00	1.56
0220021	0220022	0.83	0.68
0220031	0220032	0.88	0.93
0220041	0220042	1.27	1.59
0220051	0220052	1.61	0.82
0230011	0230012	1.22	0.78
0230021	0230022	2.16	1.57
0230031	0230032	1.44	1.34
0230041	0230042	1.50	1.30
0230051	0230052	1.27	1.09
0240011	0240012	1.44	1.49
0240021	0240022	1.66	1.10
0240031	0240032	2.27	1.99
0240041	0240042	1.22	1.31
0250011	0250012	2.22	2.04
0250021	0250022	1.50	1.42
0260011	0260012	1.88	1.55
0260021	0260022	1.22	0.78
0260031	0260032	1.50	1.38
0260041	0260042	1.44	1.30
0260051	0260052	1.72	1.44
0270011	0270012	1.33	0.94
0270021	0270022	1.16	1.21
0270031	0270032	0.77	0.91
0280011	0280012	1.94	1.31
0280021	0280022	1.05	1.35
0280031	0280032	0.83	1.25
0290011	0290012	1.33	1.20
0290021	0290022	1.77	1.18
0290031	0290032	1.61	1.16
0290041	0290042	1.66	1.33
0290051	0290052	1.83	1.06
MEAN OF MEANS =	1.40		
SD OF MEANS =	0.45		

SHORT TERM VOCATIONAL EDUCATION MULTIPLE INSTITUTES FOR EASTERN METROPOLITAN AREAS

Sponsored And Coordinated By The Division Of Vocational Education
College Of Education, Temple University, Philadelphia, Pennsylvania
Under U.S.O.E. Grant 9-0535

Institute # ..... Institute Evaluation Form #I

Name .....Date .....

Read each statement carefully and decide how you feel about it. You will agree with some statements and disagree with others. There are five possible answers to each statement. The "undecided" answer should be circled only when you have no opinion. Circle one answer where applicable and complete all statements. The purpose in requesting your name is to pair your pre-test with your post-test. All information furnished is confidential.

Example:	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Air pollution must be attacked at the national, state and local levels	(SA)	A	U	D	SD

? This person feels in no uncertain terms that air pollution must be attacked.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. Vocational education should be just as much concerned with semi-skilled and operative type programs as it is in skilled and technical programs	SA	A	U	D	SD
2. Students who exhibit the ability to succeed in college and whose stated goal is college, should be discouraged from taking vocational education courses	SA	A	U	D	SD
3. The importance of vocational education cannot be emphasized enough to students	SA	A	U	D	SD
4. Failure to offer public vocational education and training cannot be justified in a democratic society	SA	A	U	D	SD
5. Vocational education trains for jobs which don't exist	SA	A	U	D	SD
6. The major function of the high school should be the preparation of students for entrance into college	SA	A	U	D	SD
7. Vocational education should be offered only to students with low academic ability	SA	A	U	D	SD

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
8. The cost of training workers should not be born by the public school system	SA	A	U	D	SD
9. Vocational education should not be in the high school because its skilled teacher qualifications, scheduling, and curricula are so different from regular high school requirements	SA	A	U	D	SD
10. Vocational education at the secondary level should be conducted outside the academic school system in separate vocational schools	SA	A	U	D	SD
11. The importance of vocational education cannot be emphasized enough to the general educators	SA	A	U	D	SD
12. High school graduates, regardless of the course taken, should be equipped upon graduation with a salable skill	SA	A	U	D	SD
13. Increased opportunities for vocational education will result in fewer dropouts	SA	A	U	D	SD
14. Vocational education contributes to the solution of unemployment	SA	A	U	D	SD
15. For the "average" student, academic educational courses are more useful than vocational courses	SA	A	U	D	SD
16. Whether vocational education is offered should be an important factor in determining public high school accreditation	SA	A	U	D	SD
17. The climate for vocational education is better in a comprehensive high school than in a separate vocational school	SA	A	U	D	SD
18. The information provided in the college preparatory course of study is more applicable to getting and holding a job than the information provided in a vocational education course	SA	A	U	D	SD
19. More "average" students should be encouraged to enroll in vocational education programs	SA	A	U	D	SD
20. Vocational education is an educational frill	SA	A	U	D	SD
21. No area of education is more or less important than vocational education	SA	A	U	D	SD
22. The importance of vocational education cannot be emphasized enough to the lay public	SA	A	U	D	SD

	Strongly Agree	Agree	Undecided	Disagree	Disagree Strongly
23. The general education curriculum is the best preparation for entry into an occupation upon graduation from high school	SA	A	U	D	SD
24. Vocational education courses are as important for college bound students as they are for non-college bound students	SA	A	U	D	SD
25. Funds allocated in the school budget to vocational education should be in proportion to those students who enter the labor market from school	SA	A	U	D	SD
26. The national per capita income is adversely affected as public support for vocational education declines	SA	A	U	D	SD
27. Leaders of minority groups oppose vocational education for their people	SA	A	U	D	SD
28. Vocational education courses prepare students for many jobs which lack public prestige	SA	A	U	D	SD
29. Leaders of minority groups prefer college prep programs for their people rather than vocational education	SA	A	U	D	SD
30. Youth are being educationally shortchanged due to inadequate vocational offerings	SA	A	U	D	SD
31. Vocational education in rural areas is more important than vocational education in urban areas	SA	A	U	D	SD
32. More "above average" students should be encouraged to enroll in vocational education	SA	A	U	D	SD
33. Currently employed vocational education teachers are less adequately prepared for their jobs than academic teachers	SA	A	U	D	SD
34. Vocational education teachers know and meet the individual needs of their students better than academic teachers	SA	A	U	D	SD
35. Only the non-college-bound need vocational education	SA	A	U	D	SD
36. Parents of minority group students generally exhibit little or no interest in their children's progess in school.	SA	A	U	D	SD
37. Children whose parents are foreign born get more parental support for entering a vocational program than children from parents born in America	SA	A	U	D	SD

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
38. Most students would not benefit from the job skill instruction offered in vocational education programs	SA	A	U	D	SD
39. Vocational education courses are beneficial primarily for those who are terminating their education at the end of high school	SA	A	U	D	SD
40. The vocational education curriculum provides a better preparation for more jobs than does the college preparatory curriculum	SA	A	U	D	SD
41. Vocational education skill courses provide learning experiences geared to individual needs better than academic courses	SA	A	U	D	SD
42. Vocational education programs help keep the potential dropout in school	SA	A	U	D	SD
43. Vocational education should be delayed until after high school graduation	SA	A	U	D	SD
44. Employers prefer college preparatory graduates to vocational education graduates because they are more capable	SA	A	U	D	SD
45. Occupations, other than the professions, require less able students than the college preparatory students.....	SA	A	U	D	SD
46. Employers would prefer vocational graduates over college preparatory graduates, if more able, rather than less able students elected vocational education	SA	A	U	D	SD
47. Academic proficiency should count more than vocational proficiency when setting high school graduation requirements for vocational students	SA	A	U	D	SD
48. Academic counseling should be given precedence over occupational counseling because high school youth are too inexperienced to make occupational decisions	SA	A	U	D	SD
49. The shop portion of vocational education is important to public education because it provides a haven for problem youth	SA	A	U	D	SD
50. Vocational education should prepare the student for college as well as for work	SA	A	U	D	SD
51. Part-time cooperative vocational education is the best type because the skilled training is given in industry where it is always available, kept up-to-date, and avoids costly educational physical facilities, equipment and staff	SA	A	U	D	SD
52. Minority groups attending vocational education programs want preferential treatment	SA	A	U	D	SD

		Strongly Agree	Agree	Un-decided	Dis-agree	IX-1 Strongly Disagree
IX-53.	High school students should be encouraged to plan to go to college until they prove they are unable to succeed in the college preparatory courses	SA	A	U	D	SD
IX-54.	Vocational education should be the last resort for high school students .	SA	A	U	D	SD
IX-55.	The placement of vocational graduates can best be done through an outside agency such as employment security	SA	A	U	D	SD
IX-56.	High school vocational guidance services should be coordinated with out of school youth and adult programs of vocational education	SA	A	U	D	SD
IX-57.	The academic requirements for graduation should take precedence over the vocational requirements . . .	SA	A	U	D	SD
IX-58.	Academic preparation rather than vocational education and training is better for minority youth because of their difficulty in getting accepted by a union . . .	SA	A	U	D	SD
IX-59.	Vocational education, no matter how good, is of little real value because the unions control who gets hired . .	SA	A	U	D	SD
IX-60.	Socio-economic and technological forces and factors operating in the world today have made vocational guidance and counseling almost impossible	SA	A	U	D	SD

		Strongly Agree	Agree	Un-decided	Dis-agree	IX-1 Strongly Disagree
IX-61.	Graduates of the skilled craft vocational education and training programs such as machinists, plumbers, carpenters, electricians, beauticians, are seldom unemployed	SA	A	U	D	SD
IX-62.	Vocational guidance services in metropolitan cities should be available not only during normal school hours but in the evening as well . .	SA	A	U	D	SD
IX-63.	Vocational guidance services in metropolitan cities should include counselors with facility in foreign languages representative of the people served .	SA	A	U	D	SD

		Strongly Agree	Agree	Un-decided	Dis-agree	IX-2 Strongly Disagree
IX-64.	Vocational guidance functions should be coordinated with whatever subjects possible .	SA	A	U	D	SD
IX-65.	Good work habits and attitudes are essential to getting, holding and advancing in a job . .	SA	A	U	D	SD
IX-66.	Vocational education should prepare for entrance to college as well as for a job . .	SA	A	U	D	SD
IX-67.	The ratio of pupils to vocational counselors is such that only very limited guidance services can be provided . . .	SA	A	U	D	SD
IX-68.	Placement and follow-up services are important to vocational education program evaluation . .	SA	A	U	D	SD
IX-69.	Vocational guidance has little value if the school system has limited vocational choices . .	SA	A	U	D	SD
IX-70.	Anyone can learn a skilled or technical occupation if he really wants to . .	SA	A	U	D	SD
IX-71.	A machine operator, such as a lathe hand, has a skilled job	SA	A	U	D	SD
IX-72.	Vocational educators should get more concerned over the youth who can only become semi-skilled workers because they are the ones most adversely affected by technology	SA	A	U	D	SD
IX-73.	The percentage of youth in metropolitan city school systems desiring vocational education is insignificant in comparison to the percentage of youth who desire college preparatory education . .	SA	A	U	D	SD

SHORT TERM VOCATIONAL EDUCATION MULTIPLE INSTITUTES FOR
EASTERN METROPOLITAN AREAS

Sponsored And Coordinated By The Division of Vocational Education
College of Education, Temple University, Philadelphia, Pennsylvania
Under U.S.O.E. Grant 9-0535

* * * * * * * * * * * * * * * * * * *

Institute # _____ Institute Evaluation Form #II

Name: _____

Read each statement carefully and decide how you feel about it. You will agree with some statements and disagree with others. There are five possible answers to each statement. The "undecided" answer should be circled only when you have no opinion. Circle one answer where applicable and complete all statements. The purpose in requesting your name is to pair your pre-test with your post-test. All information furnished is confidential.

Example:

	Strongly Agree	Agree	Un-decided	Dis-agree	Strongly Disagree
Air pollution must be attacked at the national, state and local levels . .	(SA)	A	U	D	SD

This person feels in no uncertain terms that air pollution must be attacked.

- -

	Strongly Agree	Agree	Un-decided	Dis-agree	Strongly Disagree
1. The objectives of this Institute were clear to me	SA	A	U	D	SD
2. The objectives of this Institute were not realistic	SA	A	U	D	SD
3. Specific objectives made it easy to work efficiently	SA	A	U	D	SD
4. The participants accepted the objectives of this Institute	SA	A	U	D	SD

		Strongly Agree	Agree	Un-decided	Dis-agree	Strongly Disagree
5.	The objectives of this Institute were not the same as my objectives . .	SA	A	U	D	SD
6.	I did not learn anything new	SA	A	U	D	SD
7.	The material presented was valuable to me	SA	A	U	D	SD
8.	I could have experienced as much by reading a book . .	SA	A	U	D	SD
9.	Possible solutions to my problems were considered .	SA	A	U	D	SD
10.	The information presented was too elementary	SA	A	U	D	SD
11.	The speakers really knew their subject	SA	A	U	D	SD
12.	The discussion leaders were well prepared	SA	A	U	D	SD
13.	I was stimulated to think about the topics presented .	SA	A	U	D	SD
14.	New professional associations were made which will help .	SA	A	U	D	SD
15.	We worked together well as a group	SA	A	U	D	SD
16.	We did not relate theory to practice	SA	A	U	D	SD
17.	The sessions followed a logical pattern	SA	A	U	D	SD
18.	The schedule was too inflexible	SA	A	U	D	SD
19.	The group discussions were excellent	SA	A	U	D	SD
20.	There was very little time for informal dialogue . .	SA	A	U	D	SD
21.	I did not have an opportunity to express my ideas . . .	SA	A	U	D	SD

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		Strongly Agree	Agree	Un-decided	Dis-agree	Strongly Disagree
22.	I really felt a part of this group	SA	A	U	D	SD
23.	My time was well spent .	SA	A	U	D	SD
24.	The Institute met my expectations	SA	A	U	D	SD
25.	The reference materials that were provided were very helpful	SA	A	U	D	SD
26.	Too much time was devoted to trivial matters	SA	A	U	D	SD
27.	The information presented was too advanced	SA	A	U	D	SD
28.	The content presented was applicable to the important problems in this area . .	SA	A	U	D	SD
29.	Institutes such as this should be offered again in future years	SA	A	U	D	SD
30.	Institutes such as this will contribute greatly to stimulating interest in improving vocational education in the metropolitan areas	SA	A	U	D	SD

31. As a result of your participation in this institute, what plans have you formulated which you may present through appropriate channels for consideration and action in your community either now or the immediate future? Outline briefly the key points.

32. As a result of your contacts with the participants and consultants at this institute, have you decided to seek some continuing means of exchanging information with any of them? What types of information can the consultants or participants contribute that would be helpful to your work?

33. In your opinion, what were the major strengths of this institute?

34. In your opinion, what were the major weaknesses of this institute?

35. If you were to conduct an institute similar to this one, what would you do differently from what was done in this institute?

36. Additional comments about institute.

37. If you had it to do over again would you apply for this institute which you have just completed? Yes_____ No_____ Uncertain_____

38. If an institute such as this is held again would you recommend to your peers that they attend? Yes_____ No_____ Uncertain_____

It will be noted that questions IX-53 through IX-73 have been added to Institute Evaluation form #1. These questions plus those in Institute Evaluation Form II were added in a special effort to provide a proper evaluation of each of the Multiple Institutes.

The results, therefore, have special significance for this report.

APPENDIX J

STATISTICAL DATA GENERATED

FROM PRE AND POST TESTS

ANALYSIS OF THE EVALUATION FORMS I AND II GIVEN AT

THE VOCATIONAL EDUCATION INSTITUTE AT

STATE UNIVERSITY COLLEGE AT OSWEGO

Before any conclusions as to the effectiveness of any institute can be made, the adequacy of the instruments must be determined. Both instruments used in this institute showed the necessary psychometric characteristics to lend confidence in the findings. The reliability estimate for Institute Evaluation Form I was .807 pre-institute and .797 post-institute. The reliability estimate for Institute Form II was .92. These data lend support to the conclusion that the questionnaires were more than adequate. (See Table I).

The results obtained from Form I would lend support to the hypothesis that the Institute was highly effective in changing the attitudes of the participants. Pre-Post differences in responses in a positive direction were significant beyond the .001 level. Means and SD are presented in Table II. (See table in Appendix). Of these items whose response patterns tended to change, over 2/3 changed in a positive direction. The second instrument which was an evaluation of the institute itself was clearly very favorable. One hundred percent of the items had a median response in a positive direction. It would appear that the institute was considered by the participants as very appropriate to their needs.

Included in this report are several item analyses which include individual scores and response patterns obtained from Form II and the Pre-Post administration of Form I. Also included is an item by item display of Pre-Post responses on Form I. (See section labled Comparison of Pre-Post). For convenience, responses obtained from the pre-test for each item are displayed directly above the responses obtained from post-testing.

TABLE I

Reliability Data

Instrument I	Pre	O/E = .807
	Post	O/E = .797
Instrument II	Corr.	O/E = .92

TABLE II

Scoring — Scored on a 5 pt. Scale

Device	Adm.	Items	$\bar{X}$	SD
Inst. I	One only	32	123.6	14.8
Inst. II	Pre	73	269.6	17.8
Inst. III	Post	73	278.6	16.7

Differences on Instrument I

Mean differences between Form I Pre-Post 9.00
SD of Differences 17.4

$t = 3.6$ $p < .001$

Pearson r Pre-Post = .495

Instrument II

100% of items generated at least 60% favorable comment.

90% of items generated at least 70% favorable comment.

Median category weight assignment by subjects for items was 4.

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MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
INSTITUTE EVALUATION FORM NO. 1 PRETEST
PAGE 1.

MEAN AND SD FOR PART I = 189.67, 8.38

MEAN AND SD FOR PART II = 79.91, 14.28

MEAN AND SD FOR TOTAL = 269.59, 17.83

PEARSON R PART I X PART II = 0.178
KR21 RELIABILITY ESTIMATE = ******
NUMBER OF SUBJECTS = 49
UNCORRECTED ODD EVEN REL = 0.677
CORRECTED ODD EVEN REL = 0.807
STANDARD ERROR ESTIMATE = 7.826

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
0011	278	0.47	191	0.15	87	0.49
0021	297	1.53	206	1.94	91	0.77
0031	274	0.24	193	0.39	81	0.07
0051	259	-0.59	177	-1.51	82	0.14
0061	281	0.63	195	0.63	86	0.42
0071	290	1.14	203	1.58	87	0.49
0081	258	-0.64	179	-1.27	79	0.06
0091	286	0.91	196	0.75	90	0.70
0101	300	1.70	208	2.18	92	0.84
0111	279	0.52	290	0.03	89	0.63
0121	255	-0.81	273	-1.98	82	0.14
0131	268	-0.08	286	-0.43	82	0.14
0141	293	1.31	205	1.82	88	0.56
0151	282	0.69	294	0.51	88	0.56
0161	273	0.19	190	0.03	83	0.21
0171	269	-0.03	188	-0.19	81	0.07
0181	295	1.42	201	1.35	94	0.98
0191	281	0.63	194	0.51	87	0.49
0201	276	0.35	188	-0.19	88	0.56
0211	285	0.86	194	0.51	91	0.77
0221	279	0.52	192	0.27	87	0.49
0231	259	-0.59	177	-1.51	82	0.14
0241	252	-0.98	176	-1.63	76	-0.27
0251	267	-0.14	188	-0.19	79	-0.06
0261	253	-0.93	178	-1.39	75	-0.34
0271	278	0.47	194	0.51	84	0.28
0281	263	-0.36	283	-0.79	80	0.00
0291	286	0.91	186	-0.43	100	1.40
0301	268	-0.08	184	-0.67	84	0.28

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
INSTITUTE EVALUATION FORM NO. 1 PRETEST

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
0311	257	-0.70	178	-1.39	79	-0.06
0321	261	-0.48	176	-1.63	85	0.35
0331	241	-1.60	187	-0.31	54	-1.81
0341	272	0.13	188	-0.19	84	0.28
0351	282	0.69	194	0.51	88	0.56
0361	285	0.86	195	0.63	90	0.70
0371	271	0.07	189	-0.08	82	0.14
0381	250	-1.09	176	-1.63	74	-0.41
0391	271	0.07	193	0.39	78	-0.13
0401	235	-1.93	189	-0.08	46	-2.37
0411	284	0.80	197	0.87	87	0.49
0421	266	-0.20	182	-0.91	84	0.28
0431	272	0.13	189	-0.08	83	0.21
0441	238	-1.77	193	0.39	45	-2.44
0451	232	-2.10	188	-0.19	44	-2.51
0461	228	-2.33	192	0.27	36	-3.07
0471	275	0.30	189	-0.08	86	0.42
0481	235	-1.93	192	0.27	43	-2.58
0491	291	1.20	203	1.58	88	0.56

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MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
INSTITUTE EVALUATION FORM NO. 1 PRETEST

1 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	16	9	0	0	0	0	0	0	0	0	25
LOWER	18	5	0	1	0	0	0	0	0	0	24
TOTAL	34	14	0	1	0	0	0	0	0	0	
PERCENT	69	28	0	2	0	0	0	0	0	0	

2 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	2	11	11	0	0	0	0	0	25
LOWER	1	2	0	10	11	0	0	0	0	0	24
TOTAL	1	3	2	21	22	0	0	0	0	0	
PERCENT	2	6	4	42	44	0	0	0	0	0	

3 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	12	12	1	0	0	0	0	0	0	0	25
LOWER	16	7	1	0	0	0	0	0	0	0	24
TOTAL	28	19	2	0	0	0	0	0	0	0	
PERCENT	57	38	4	0	0	0	0	0	0	0	

4 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	17	6	0	0	2	0	0	0	0	0	25
LOWER	14	8	1	0	1	0	0	0	0	0	24
TOTAL	31	14	1	0	3	0	0	0	0	0	
PERCENT	63	28	2	0	6	0	0	0	0	0	

5 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	3	2	16	4	0	0	0	0	0	25
LOWER	1	2	3	12	6	0	0	0	0	0	24
TOTAL	1	5	5	28	10	0	0	0	0	0	
PERCENT	2	10	10	57	20	0	0	0	0	0	

6 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	4	21	0	0	0	0	0	25
LOWER	0	1	1	8	14	0	0	0	0	0	24
TOTAL	0	1	1	12	35	0	0	0	0	0	
PERCENT	0	2	2	24	71	0	0	0	0	0	

7 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	4	21	0	0	0	0	0	25
LOWER	0	0	0	3	21	0	0	0	0	0	24
TOTAL	0	0	0	7	42	0	0	0	0	0	
PERCENT	0	0	0	14	85	0	0	0	0	0	

8 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	1	3	12	8	0	0	0	0	0	25
LOWER	0	5	3	11	5	0	0	0	0	0	24
TOTAL	1	6	6	23	13	0	0	0	0	0	
PERCENT	2	12	12	46	26	0	0	0	0	0	

9 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	12	13	0	0	0	0	0	25
LOWER	1	2	1	12	8	0	0	0	0	0	24
TOTAL	1	2	1	24	21	0	0	0	0	0	
PERCENT	2	4	2	48	42	0	0	0	0	0	

10 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	1	11	11	0	0	0	0	1	25
LOWER	2	3	2	10	7	0	0	0	0	0	24
TOTAL	2	4	3	21	18	0	0	0	0	1	
PERCENT	4	8	6	42	36	0	0	0	0	2	

11 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	11	12	1	1	0	0	0	0	0	0	25
LOWER	11	13	0	0	0	0	0	0	0	0	24
TOTAL	22	25	1	1	0	0	0	0	0	0	
PERCENT	44	51	2	2	0	0	0	0	0	0	

12 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	11	9	0	5	0	0	0	0	0	0	25
LOWER	8	11	2	2	1	0	0	0	0	0	24
TOTAL	19	20	2	7	1	0	0	0	0	0	
PERCENT	38	40	4	14	2	0	0	0	0	0	

13 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	7	14	3	1	0	0	0	0	0	0	25
LOWER	10	11	2	1	0	0	0	0	0	0	24
TOTAL	17	25	5	2	0	0	0	0	0	0	
PERCENT	34	51	10	4	0	0	0	0	0	0	

14 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	17	1	1	1	0	0	0	0	0	25
LOWER	6	13	4	1	0	0	0	0	0	0	24
TOTAL	11	30	5	2	1	0	0	0	0	0	
PERCENT	22	61	10	4	2	0	0	0	0	0	

15 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	1	17	7	0	0	0	0	0	25
LOWER	0	2	3	15	4	0	0	0	0	0	24
TOTAL	0	2	4	32	11	0	0	0	0	0	
PERCENT	0	4	8	65	22	0	0	0	0	0	

16 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	9	11	4	1	0	0	0	0	0	0	25
LOWER	5	10	6	3	0	0	0	0	0	0	24
TOTAL	14	21	10	4	0	0	0	0	0	0	
PERCENT	28	42	20	8	0	0	0	0	0	0	

17 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	7	5	6	1	0	0	0	0	0	25
LOWER	4	6	5	6	3	0	0	0	0	0	24
TOTAL	10	13	10	12	4	0	0	0	0	0	
PERCENT	20	26	20	24	8	0	0	0	0	0	

18 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	2	14	9	0	0	0	0	0	25
LOWER	0	0	1	15	7	0	0	0	0	0	24
TOTAL	0	1	3	29	16	0	0	0	0	0	
PERCENT	0	2	6	59	32	0	0	0	0	0	

19 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	16	3	1	0	0	0	0	0	0	25
LOWER	4	14	2	4	0	0	0	0	0	0	24
TOTAL	9	30	5	5	0	0	0	0	0	0	
PERCENT	18	61	10	10	0	0	0	0	0	0	

20 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	7	18	0	0	0	0	0	25
LOWER	0	0	0	6	18	0	0	0	0	0	24
TOTAL	0	0	0	13	36	0	0	0	0	0	
PERCENT	0	0	0	26	73	0	0	0	0	0	

21 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	12	10	1	2	0	0	0	0	0	0	25
LOWER	10	11	0	3	0	0	0	0	0	0	24
TOTAL	22	21	1	5	0	0	0	0	0	0	
PERCENT	44	42	2	10	0	0	0	0	0	0	

22 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	15	10	0	0	0	0	0	0	0	0	25
LOWER	12	11	0	1	0	0	0	0	0	0	24
TOTAL	27	21	0	1	0	0	0	0	0	0	
PERCENT	55	42	0	2	0	0	0	0	0	0	

23 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	2	0	18	5	0	0	0	0	0	25
LOWER	1	3	2	13	5	0	0	0	0	0	24
TOTAL	1	5	2	31	10	0	0	0	0	0	
PERCENT	2	10	4	63	20	0	0	0	0	0	

24 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	12	3	5	0	0	0	0	0	0	25
LOWER	1	15	3	5	0	0	0	0	0	0	24
TOTAL	6	27	6	10	0	0	0	0	0	0	
PERCENT	12	55	12	20	0	0	0	0	0	0	

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25	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	1	5	6	8	4	0	0	0	0	1	25
	LOWER	0	7	5	10	2	0	0	0	0	0	24
	TOTAL	1	12	11	18	6	0	0	0	0	1	
	PERCENT	2	24	22	36	12	0	0	0	0	2	

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26	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	4	13	7	1	0	0	0	0	0	0	25
	LOWER	2	11	11	0	0	0	0	0	0	0	24
	TOTAL	6	24	18	1	0	0	0	0	0	0	
	PERCENTZ	12	48	36	2	0	0	0	0	0	0	

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27	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	4	2	15	4	0	0	0	0	0	25
	LOWER	0	2	3	17	2	0	0	0	0	0	24
	TOTAL	0	6	5	32	6	0	0	0	0	0	
	PERCENT	0	12	10	65	12	0	0	0	0	0	

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28	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	10	3	9	3	0	0	0	0	0	25
	LOWER	0	8	2	9	5	0	0	0	0	0	24
	TOTAL	0	18	5	18	8	0	0	0	0	0	
	PERCENT	0	36	10	36	16	0	0	0	0	0	

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29	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	8	3	14	0	0	0	0	0	0	25
	LOWER	0	6	6	12	0	0	0	0	0	0	24
	TOTAL	0	14	9	26	0	0	0	0	0	0	
	PERCENT	0	28	18	53	0	0	0	0	0	0	

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30	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	12	11	1	0	1	0	0	0	0	0	25
	LOWER	2	15	3	4	0	0	0	0	0	0	24
	TOTAL	14	26	4	4	1	0	0	0	0	0	
	PERCENT	28	53	8	8	2	0	0	0	0	0	

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31 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	1	0	1	16	7	0	0	0	0	0	25
LOWER	0	1	3	15	5	0	0	0	0	0	24
TOTAL	1	1	4	31	12	0	0	0	0	0	
PERCENT	2	2	8	63	24	0	0	0	0	0	

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32 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	5	16	4	0	0	0	0	0	0	0	25
LOWER	2	16	5	0	1	0	0	0	0	0	24
TOTAL	7	32	9	0	1	0	0	0	0	0	
PERCENT	14	65	18	0	2	0	0	0	0	0	

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33 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	0	8	3	10	4	0	0	0	0	0	25
LOWER	0	4	3	14	3	0	0	0	0	0	24
TOTAL	0	12	6	24	7	0	0	0	0	0	
PERCENT	0	24	12	48	14	0	0	0	0	0	

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34 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	1	6	9	8	1	0	0	0	0	0	25
LOWER	0	6	8	9	1	0	0	0	0	0	24
TOTAL	1	12	17	17	2	0	0	0	0	0	
PERCENT	2	24	34	34	4	0	0	0	0	0	

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35 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	0	1	1	13	10	0	0	0	0	0	25
LOWER	0	0	0	18	6	0	0	0	0	0	24
TOTAL	0	1	1	31	16	0	0	0	0	0	
PERCENT	0	2	2	63	32	0	0	0	0	0	

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36 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	0	3	2	15	5	0	0	0	0	0	25
LOWER	0	3	6	15	0	0	0	0	0	0	24
TOTAL	0	6	8	30	5	0	0	0	0	0	
PERCENT	0	12	16	61	10	0	0	0	0	0	

37 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	7	15	3	0	0	0	0	0	0	25
LOWER	0	9	14	1	0	0	0	0	0	0	24
TOTAL	0	16	29	4	0	0	0	0	0	0	
PERCENT	0	32	59	8	0	0	0	0	0	0	

38 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	0	1	17	6	0	0	0	0	0	25
LOWER	0	0	1	20	3	0	0	0	0	0	24
TOTAL	1	0	2	37	9	0	0	0	0	0	
PERCENT	2	0	4	75	18	0	0	0	0	0	

39 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	7	0	16	1	0	0	0	0	0	25
LOWER	0	9	0	14	1	0	0	0	0	0	24
TOTAL	1	16	0	30	2	0	0	0	0	0	
PERCENT	2	32	0	61	4	0	0	0	0	0	

40 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	13	3	5	0	0	0	0	0	0	25
LOWER	0	15	7	2	0	0	0	0	0	0	24
TOTAL	4	28	10	7	0	0	0	0	0	0	
PERCENT	8	57	20	14	0	0	0	0	0	0	

41 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	11	5	4	0	0	0	0	0	0	25
LOWER	0	15	7	1	0	0	0	0	0	1	24
TOTAL	5	26	12	5	0	0	0	0	0	1	
PERCENT	10	53	24	10	0	0	0	0	0	2	

42 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	3	16	4	2	0	0	0	0	0	0	25
LOWER	0	20	3	1	0	0	0	0	0	0	24
TOTAL	3	36	7	3	0	0	0	0	0	0	
PERCENT	6	73	14	6	0	0	0	0	0	0	

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43	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	1	0	13	11	0	0	0	0	0	25
	LOWER	0	0	0	14	10	0	0	0	0	0	24
	TOTAL	0	1	0	27	21	0	0	0	0	0	
	PERCENT	0	2	0	55	42	0	0	0	0	0	

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44	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	6	14	5	0	0	0	0	0	25
	LOWER	0	1	7	11	5	0	0	0	0	0	24
	TOTAL	0	1	13	25	10	0	0	0	0	0	
	PERCENT	0	2	26	51	20	0	0	0	0	0	

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45	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	2	5	12	6	0	0	0	0	0	25
	LOWER	0	1	2	18	3	0	0	0	0	0	24
	TOTAL	0	3	7	30	9	0	0	0	0	0	
	PERCENT	0	6	14	61	18	0	0	0	0	0	

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46	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	2	15	4	3	1	0	0	0	0	0	25
	LOWER	2	13	3	6	0	0	0	0	0	0	24
	TOTAL	4	28	7	9	1	0	0	0	0	0	
	PERCENT	8	57	14	18	2	0	0	0	0	0	

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47	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	1	5	15	4	0	0	0	0	0	25
	LOWER	0	0	5	17	2	0	0	0	0	0	24
	TOTAL	0	1	10	32	6	0	0	0	0	0	
	PERCENT	0	2	20	65	12	0	0	0	0	0	

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48	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	1	13	11	0	0	0	0	0	25
	LOWER	0	0	1	10	13	0	0	0	0	0	24
	TOTAL	0	0	2	23	24	0	0	0	0	0	
	PERCENT	0	0	4	46	48	0	0	0	0	0	

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49	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	3	1	14	7	0	0	0	0	0	25
	LOWER	0	1	0	13	10	0	0	0	0	0	24
	TOTAL	0	4	1	27	17	0	0	0	0	0	
	PERCENT	0	8	2	55	34	0	0	0	0	0	

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50	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	2	9	6	6	2	0	0	0	0	0	25
	LOWER	3	15	2	4	0	0	0	0	0	0	24
	TOTAL	5	24	8	10	2	0	0	0	0	0	
	PERCENT	10	48	16	20	4	0	0	0	0	0	

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51	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	14	5	5	1	0	0	0	0	0	25
	LOWER	2	5	6	10	1	0	0	0	0	0	24
	TOTAL	2	19	11	15	2	0	0	0	0	0	
	PERCENT	4	38	22	30	4	0	0	0	0	0	

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52	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	4	3	18	0	0	0	0	0	0	25
	LOWER	0	2	4	14	4	0	0	0	0	0	24
	TOTAL	0	6	7	32	4	0	0	0	0	0	
	PERCENT	0	12	14	65	8	0	0	0	0	0	

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53	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	1	16	8	0	0	0	0	0	25
	LOWER	0	2	1	16	5	0	0	0	0	0	24
	TOTAL	0	2	2	32	13	0	0	0	0	0	
	PERCENT	0	4	4	65	26	0	0	0	0	0	

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54	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	10	15	0	0	0	0	0	25
	LOWER	0	0	0	8	16	0	0	0	0	0	24
	TOTAL	0	0	0	18	31	0	0	0	0	0	
	PERCENT	0	0	0	36	63	0	0	0	0	0	

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55	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	2	1	12	10	0	0	0	0	0	25
	LOWER	0	1	4	14	5	0	0	0	0	0	24
	TOTAL	0	3	5	26	15	0	0	0	0	0	
	PERCENT	0	6	10	53	30	0	0	0	0	0	

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56	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	5	15	2	1	2	0	0	0	0	0	25
	LOWER	5	18	1	0	0	0	0	0	0	0	24
	TOTAL	10	33	3	1	2	0	0	0	0	0	
	PERCENT	20	67	6	2	4	0	0	0	0	0	

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57	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	1	0	5	15	4	0	0	0	0	0	25
	LOWER	0	1	4	17	2	0	0	0	0	0	24
	TOTAL	1	1	9	32	6	0	0	0	0	0	
	PERCENT	2	2	18	65	12	0	0	0	0	0	

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58	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	2	18	5	0	0	0	0	0	25
	LOWER	0	2	3	14	5	0	0	0	0	0	24
	TOTAL	0	2	5	32	10	0	0	0	0	0	
	PERCENT	0	4	10	65	20	0	0	0	0	0	

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59	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	2	16	7	0	0	0	0	0	25
	LOWER	0	1	1	18	4	0	0	0	0	0	24
	TOTAL	0	1	3	34	11	0	0	0	0	0	
	PERCENT	0	2	6	69	22	0	0	0	0	0	

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60	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	13	12	0	0	0	0	0	25
	LOWER	0	1	2	17	4	0	0	0	0	0	24
	TOTAL	0	1	2	30	16	0	0	0	0	0	
	PERCENT	0	2	4	61	32	0	0	0	0	0	

61 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	13	3	4	1	0	0	0	0	0	25
LOWER	5	13	3	3	0	0	0	0	0	0	24
TOTAL	9	26	6	7	1	0	0	0	0	0	
PERCENT	18	53	12	14	2	0	0	0	0	0	

62 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	17	8	0	0	0	0	0	0	0	0	25
LOWER	11	11	2	0	0	0	0	0	0	0	24
TOTAL	28	19	2	0	0	0	0	0	0	0	
PERCENT	57	38	4	0	0	0	0	0	0	0	

63 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	11	13	1	0	0	0	0	0	0	0	25
LOWER	7	15	1	0	1	0	0	0	0	0	24
TOTAL	18	28	2	0	1	0	0	0	0	0	
PERCENT	36	57	4	0	2	0	0	0	0	0	

64 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	12	12	1	0	0	0	0	0	0	0	25
LOWER	4	13	1	0	0	0	0	0	0	6	24
TOTAL	16	25	2	0	0	0	0	0	0	6	
PERCENT	32	51	4	0	0	0	0	0	0	12	

65 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	20	5	0	0	0	0	0	0	0	0	25
LOWER	14	4	0	0	0	0	0	0	0	6	24
TOTAL	34	9	0	0	0	0	0	0	0	6	
PERCENT	69	18	0	0	0	0	0	0	0	12	

66 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	3	9	8	4	1	0	0	0	0	0	25
LOWER	3	11	1	3	0	0	0	0	0	6	24
TOTAL	6	20	9	7	1	0	0	0	0	6	
PERCENT	12	40	18	14	2	0	0	0	0	12	

67 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	7	11	2	5	0	0	0	0	0	0	25
LOWER	4	8	3	3	0	0	0	0	0	6	24
TOTAL	11	19	5	8	0	0	0	0	0	6	
PERCENT	22	38	10	16	0	0	0	0	0	12	

68 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	17	5	0	0	0	0	0	0	0	0	22
LOWER	10	11	0	0	0	0	0	0	0	0	21
TOTAL	27	16	0	0	0	0	0	0	0	0	
PERCENT	62	37	0	0	0	0	0	0	0	0	

69 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	4	0	11	5	0	0	0	0	0	22
LOWER	3	3	2	12	1	0	0	0	0	0	21
TOTAL	5	7	2	23	6	0	0	0	0	0	
PERCENT	11	16	4	53	13	0	0	0	0	0	

70 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	3	2	11	5	0	0	0	0	0	22
LOWER	0	1	3	13	4	0	0	0	0	0	21
TOTAL	1	4	5	24	9	0	0	0	0	0	
PERCENT	2	9	11	55	20	0	0	0	0	0	

71 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	13	3	5	0	0	0	0	0	0	22
LOWER	2	13	1	5	0	0	0	0	0	0	21
TOTAL	3	26	4	10	0	0	0	0	0	0	
PERCENT	6	60	9	23	0	0	0	0	0	0	

72 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	13	2	3	0	0	0	0	0	0	22
LOWER	4	9	5	3	0	0	0	0	0	0	21
TOTAL	8	22	7	6	0	0	0	0	0	0	
PERCENT	18	51	16	13	0	0	0	0	0	0	

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COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
INSTITUTE EVALUATION FORM NO. 1 PRETEST
PAGE 15.

73 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	4	2	9	6	0	0	0	0	0	22
LOWER	2	2	5	8	4	0	0	0	0	0	21
TOTAL	3	6	7	17	10	0	0	0	0	0	
PERCENT	6	13	16	39	23	0	0	0	0	0	

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
INSTITUTE EVALUATION FORM NO. 1 POSTTEST

MEAN AND SD FOR PART I = 193.34, 10.58

MEAN AND SD FOR PART II = 85.24, 8.88

MEAN AND SD FOR TOTAL = 278.59, 16.74

PEARSON R PART I X PART II = 0.466
KR21 RELIABILITY ESTIMATE = ******
NUMBER OF SUBJECTS = 49
UNCORRECTED ODD EVEN REL = 0.663
CORRECTED ODD EVEN REL = 0.797
STANDARD ERROR ESTIMATE = 7.536

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
0012	296	1.03	203	0.91	93	0.87
0022	309	1.81	211	1.66	98	1.43
0032	279	0.02	189	-0.41	90	0.53
0042	282	0.20	194	0.06	88	0.31
0052	277	-0.09	189	-0.41	88	0.31
0062	274	-0.27	190	-0.31	84	-0.14
0072	285	0.38	194	0.06	91	0.64
0082	287	0.50	192	-0.12	95	1.09
0092	263	-0.93	183	-0.97	80	-0.59
0102	306	1.63	210	1.57	96	1.21
0112	285	0.38	199	0.53	86	0.08
0122	261	-1.05	185	-0.78	76	-1.04
0132	272	-0.39	190	-0.31	82	-0.36
0142	304	1.51	213	1.85	91	0.64
0152	287	0.50	197	0.34	90	0.53
0162	275	-0.21	191	-0.22	84	-0.14
0172	314	2.11	221	2.61	93	0.87
0182	307	1.69	209	1.47	98	1.43
0192	269	-0.57	189	-0.41	80	-0.59
0202	272	-0.39	190	-0.31	82	-0.36
0212	293	0.86	202	0.81	91	0.64
0222	264	-0.87	182	-1.07	82	-0.36
0232	263	-0.93	179	-1.35	84	-0.14
0242	256	-1.34	182	-1.07	74	-1.26
0252	265	-0.81	189	-0.41	76	-1.04
0262	254	-1.46	177	-1.54	77	-0.92
0272	293	0.86	203	0.91	90	0.53
0282	265	-0.81	180	-1.26	85	-0.02
0292	283	0.26	190	-0.31	93	0.87
0302	267	-0.69	183	-0.97	84	-0.14

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
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INSTITUTE EVALUATION FORM NO. 1 POSTTEST

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
0312	259	-1.16	176	-1.63	83	-0.25
0322	271	-0.45	190	-0.31	81	-0.47
0332	279	0.02	188	-0.50	91	0.64
0342	289	0.62	196	0.25	93	0.87
0352	289	0.62	201	0.72	88	0.31
0362	282	0.20	192	-0.12	90	0.53
0372	281	0.14	193	-0.03	88	0.31
0382	273	-0.33	194	0.06	79	-0.70
0392	264	-0.87	183	-0.97	81	-0.47
0402	304	1.51	212	1.76	92	0.76
0412	285	0.38	194	0.06	91	0.64
0422	264	-0.87	182	-1.07	82	-0.36
0432	268	-0.63	186	-0.69	82	0.36
0442	270	-0.51	183	-0.97	87	0.19
0452	277	-0.09	195	0.15	82	-0.36
0462	277	-0.09	201	0.72	76	-1.04
0472	279	0.02	200	0.62	79	-0.70
0482	228	-3.02	187	-0.59	41	-4.98
0492	305	1.57	215	2.04	90	0.53

M 1 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	13	12	0	0	0	0	0	0	0	0	25
LOWER	14	9	1	0	0	0	0	0	0	0	24
TOTAL	27	21	1	0	0	0	0	0	0	0	
PERCENT	55	42	2	0	0	0	0	0	0	0	

M 2 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	2	11	12	0	0	0	0	0	25
LOWER	0	1	0	15	8	0	0	0	0	0	24
TOTAL	0	1	2	26	20	0	0	0	0	0	
PERCENT	0	2	4	53	40	0	0	0	0	0	

M 3 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	17	8	0	0	0	0	0	0	0	0	25
LOWER	12	12	0	0	0	0	0	0	0	0	24
TOTAL	29	20	0	0	0	0	0	0	0	0	
PERCENT	59	40	0	0	0	0	0	0	0	0	

M 4 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	17	6	0	0	2	0	0	0	0	0	25
LOWER	10	12	0	1	1	0	0	0	0	0	24
TOTAL	27	18	0	1	3	0	0	0	0	0	
PERCENT	55	36	0	2	6	0	0	0	0	0	

M 5 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	3	3	11	8	0	0	0	0	0	25
LOWER	0	2	3	17	2	0	0	0	0	0	24
TOTAL	0	5	6	28	10	0	0	0	0	0	
PERCENT	0	10	12	57	20	0	0	0	0	0	

M 6 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	5	20	0	0	0	0	0	25
LOWER	0	0	0	11	13	0	0	0	0	0	24
TOTAL	0	0	0	16	33	0	0	0	0	0	
PERCENT	0	0	0	32	67	0	0	0	0	0	

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INSTITUTE EVALUATION FORM NO. 1 POSTTEST
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											*	
M 7	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	6	19	0	0	0	0	0	0	25
	LOWER	1	0	0	4	19	0	0	0	0	0	24
	TOTAL	1	0	0	10	38	0	0	0	0	0	
	PERCENT	2	0	0	20	77	0	0	0	0	0	

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M 8	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	2	3	11	9	0	0	0	0	0	25
	LOWER	0	4	5	12	3	0	0	0	0	0	24
	TOTAL	0	6	8	23	12	0	0	0	0	0	
	PERCENT	0	12	16	46	24	0	0	0	0	0	

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M 9	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	1	9	15	0	0	0	0	0	25
	LOWER	0	0	0	11	13	0	0	0	0	0	24
	TOTAL	0	0	1	20	28	0	0	0	0	0	
	PERCENT	0	0	2	40	57	0	0	0	0	0	

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M 10	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	2	14	9	0	0	0	0	0	25
	LOWER	2	1	4	10	7	0	0	0	0	0	24
	TOTAL	2	1	6	24	16	0	0	0	0	0	
	PERCENT	4	2	12	48	32	0	0	0	0	0	

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M 11	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	14	11	0	0	0	0	0	0	0	0	25
	LOWER	12	10	1	1	0	0	0	0	0	0	24
	TOTAL	26	21	1	1	0	0	0	0	0	0	
	PERCENT	53	42	2	2	0	0	0	0	0	0	

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M 12	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	13	7	3	2	0	0	0	0	0	0	25
	LOWER	9	10	1	2	2	0	0	0	0	0	24
	TOTAL	22	17	4	4	2	0	0	0	0	0	
	PERCENT	44	34	8	8	4	0	0	0	0	0	

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M 13	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	11	10	4	0	0	0	0	0	0	0	25
	LOWER	9	12	3	0	0	0	0	0	0	0	24
	TOTAL	20	22	7	0	0	0	0	0	0	0	
	PERCENT	40	44	14	0	0	0	0	0	0	0	

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M 14	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	7	18	0	0	0	0	0	0	0	0	25
	LOWER	7	15	2	0	0	0	0	0	0	0	24
	TOTAL	14	33	2	0	0	0	0	0	0	0	
	PERCENT	28	67	4	0	0	0	0	0	0	0	

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M 15	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	22	3	0	0	0	0	0	25
	LOWER	0	1	4	16	3	0	0	0	0	0	24
	TOTAL	0	1	4	38	6	0	0	0	0	0	
	PERCENT	0	2	8	77	12	0	0	0	0	0	

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M 16	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	8	14	1	1	1	0	0	0	0	0	25
	LOWER	6	13	3	2	0	0	0	0	0	0	24
	TOTAL	14	27	4	3	1	0	0	0	0	0	
	PERCENT	28	55	8	6	2	0	0	0	0	0	

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M 17	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	5	9	6	5	0	0	0	0	0	0	25
	LOWER	2	6	5	9	2	0	0	0	0	0	24
	TOTAL	7	15	11	14	2	0	0	0	0	0	
	PERCENT	14	30	22	28	4	0	0	0	0	0	

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M 18	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	1	1	11	12	0	0	0	0	0	25
	LOWER	0	1	2	13	8	0	0	0	0	0	24
	TOTAL	0	2	3	24	20	0	0	0	0	0	
	PERCENT	0	4	6	48	40	0	0	0	0	0	

M 19	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	5	16	4	0	0	0	0	0	0	0	25
	LOWER	3	15	4	2	0	0	0	0	0	0	24
	TOTAL	8	31	8	2	0	0	0	0	0	0	
	PERCENT	16	63	16	4	0	0	0	0	0	0	

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M 20	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	7	18	0	0	0	0	0	25
	LOWER	0	0	0	4	20	0	0	0	0	0	24
	TOTAL	0	0	0	11	38	0	0	0	0	0	
	PERCENT	0	0	0	22	77	0	0	0	0	0	

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M 21	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	6	13	3	2	1	0	0	0	0	0	25
	LOWER	7	11	3	2	1	0	0	0	0	0	24
	TOTAL	13	24	6	4	2	0	0	0	0	0	
	PERCENT	26	48	12	8	4	0	0	0	0	0	

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M 22	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	16	9	0	0	0	0	0	0	0	0	25
	LOWER	10	13	0	1	0	0	0	0	0	0	24
	TOTAL	26	22	0	1	0	0	0	0	0	0	
	PERCENT	53	44	0	2	0	0	0	0	0	0	

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M 23	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	1	13	11	0	0	0	0	0	25
	LOWER	0	0	2	14	8	0	0	0	0	0	24
	TOTAL	0	0	3	27	19	0	0	0	0	0	
	PERCENT	0	0	6	55	38	0	0	0	0	0	

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M 24	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	5	12	5	3	0	0	0	0	0	0	25
	LOWER	2	17	3	2	0	0	0	0	0	0	24
	TOTAL	7	29	8	5	0	0	0	0	0	0	
	PERCENT	14	59	16	10	0	0	0	0	0	0	

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M 25	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	3	6	8	7	1	0	0	0	0	0	25
	LOWER	0	6	9	8	1	0	0	0	0	0	24
	TOTAL	3	12	17	15	2	0	0	0	0	0	
	PERCENT	6	24	34	30	4	0	0	0	0	0	

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M 26	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	4	13	7	1	0	0	0	0	0	0	25
	LOWER	2	8	10	4	0	0	0	0	0	0	24
	TOTAL	6	21	17	5	0	0	0	0	0	0	
	PERCENT	12	42	34	10	0	0	0	0	0	0	

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M 27	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	2	7	10	6	0	0	0	0	0	25
	LOWER	0	2	3	13	6	0	0	0	0	0	24
	TOTAL	0	4	10	23	12	0	0	0	0	0	
	PERCENT	0	8	20	46	24	0	0	0	0	0	

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M 28	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	1	9	3	9	3	0	0	0	0	0	25
	LOWER	0	10	1	9	4	0	0	0	0	0	24
	TOTAL	1	19	4	18	7	0	0	0	0	0	
	PERCENT	2	38	8	36	14	0	0	0	0	0	

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M 29	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	4	8	13	0	0	0	0	0	0	25
	LOWER	0	9	4	10	1	0	0	0	0	0	24
	TOTAL	0	13	12	23	1	0	0	0	0	0	
	PERCENT	0	26	24	46	2	0	0	0	0	0	

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M 30	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	8	16	1	0	0	0	0	0	0	0	25
	LOWER	4	14	3	3	0	0	0	0	0	0	24
	TOTAL	12	30	4	3	0	0	0	0	0	0	
	PERCENT	24	61	8	6	0	0	0	0	0	0	

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M 31	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	4	13	8	0	0	0	0	0	25
	LOWER	0	0	4	16	4	0	0	0	0	0	24
	TOTAL	0	0	8	29	12	0	0	0	0	0	
	PERCENT	0	0	16	59	24	0	0	0	0	0	

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M 32	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	4	19	2	0	0	0	0	0	0	0	25
	LOWER	5	16	2	1	0	0	0	0	0	0	24
	TOTAL	9	35	4	1	0	0	0	0	0	0	
	PERCENT	18	71	8	2	0	0	0	0	0	0	

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M 33	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	1	3	18	3	0	0	0	0	0	25
	LOWER	0	1	5	13	5	0	0	0	0	0	24
	TOTAL	0	2	8	31	8	0	0	0	0	0	
	PERCENT	0	4	16	63	16	0	0	0	0	0	

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M 34	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	11	9	5	0	0	0	0	0	0	25
	LOWER	0	9	9	5	1	0	0	0	0	0	24
	TOTAL	0	20	18	10	1	0	0	0	0	0	
	PERCENT	0	40	36	20	2	0	0	0	0	0	

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M 35	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	16	9	0	0	0	0	0	25
	LOWER	0	0	1	17	6	0	0	0	0	0	24
	TOTAL	0	0	1	33	15	0	0	0	0	0	
	PERCENT	0	0	2	67	30	0	0	0	0	0	

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M 36	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	1	13	11	0	0	0	0	0	25
	LOWER	0	2	1	12	9	0	0	0	0	0	24
	TOTAL	0	2	2	25	20	0	0	0	0	0	
	PERCENT	0	4	4	51	40	0	0	0	0	0	

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M 37	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	10	10	5	0	0	0	0	0	0	25
	LOWER	0	13	10	1	0	0	0	0	0	0	24
	TOTAL	0	23	20	6	0	0	0	0	0	0	
	PERCENT	0	46	40	12	0	0	0	0	0	0	

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M 38	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	1	3	0	14	7	0	0	0	0	0	25
	LOWER	0	1	1	16	6	0	0	0	0	0	24
	TOTAL	1	4	1	30	13	0	0	0	0	0	
	PERCENT	2	8	2	61	26	0	0	0	0	0	

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M 39	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	8	2	12	3	0	0	0	0	0	25
	LOWER	0	8	0	14	2	0	0	0	0	0	24
	TOTAL	0	16	2	26	5	0	0	0	0	0	
	PERCENT	0	32	4	53	10	0	0	0	0	0	

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M 40	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	4	15	4	2	0	0	0	0	0	0	25
	LOWER	2	16	4	2	0	0	0	0	0	0	24
	TOTAL	6	31	8	4	0	0	0	0	0	0	
	PERCENT	12	63	16	8	0	0	0	0	0	0	

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M 41	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	4	13	5	3	0	0	0	0	0	0	25
	LOWER	3	13	6	2	0	0	0	0	0	0	24
	TOTAL	7	26	11	5	0	0	0	0	0	0	
	PERCENT	14	53	22	10	0	0	0	0	0	0	

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M 42	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	5	16	4	0	0	0	0	0	0	0	25
	LOWER	4	20	0	0	0	0	0	0	0	0	24
	TOTAL	9	36	4	0	0	0	0	0	0	0	
	PERCENT	18	73	8	0	0	0	0	0	0	0	

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M 43	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	2	14	9	0	0	0	0	0	25
	LOWER	0	0	0	14	8	0	0	0	0	0	24
	TOTAL	0	0	2	30	17	0	0	0	0	0	
	PERCENT	0	0	4	61	34	0	0	0	0	0	

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M 44	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	1	3	16	5	0	0	0	0	0	25
	LOWER	0	0	6	17	1	0	0	0	0	0	24
	TOTAL	0	1	9	33	6	0	0	0	0	0	
	PERCENT	0	2	18	67	12	0	0	0	0	0	

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M 45	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	2	4	13	6	0	0	0	0	0	25
	LOWER	0	2	2	16	4	0	0	0	0	0	24
	TOTAL	0	4	6	2	10	0	0	0	0	0	
	PERCENT	0	8	12	59	20	0	0	0	0	0	

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M 46	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	3	8	7	6	1	0	0	0	0	0	25
	LOWER	0	13	5	6	0	0	0	0	0	0	24
	TOTAL	3	21	12	12	1	0	0	0	0	0	
	PERCENT	6	42	24	24	2	0	0	0	0	0	

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M 47	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	19	6	0	0	0	0	0	25
	LOWER	0	1	2	20	1	0	0	0	0	0	24
	TOTAL	0	1	2	39	7	0	0	0	0	0	
	PERCENT	0	2	4	79	14	0	0	0	0	0	

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M 48	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	1	0	11	13	0	0	0	0	0	25
	LOWER	0	0	1	14	9	0	0	0	0	0	24
	TOTAL	0	1	1	25	22	0	0	0	0	0	
	PERCENT	0	2	2	51	44	0	0	0	0	0	

											*	
M 49	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	1	2	1	11	10	0	0	0	0	0	25
	LOWER	1	2	0	11	10	0	0	0	0	0	24
	TOTAL	2	4	1	22	20	0	0	0	0	0	
	PERCENT	4	8	2	44	40	0	0	0	0	0	

											*	
M 50	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	2	12	5	6	0	0	0	0	0	0	25
	LOWER	2	15	4	2	0	0	0	0	0	0	24
	TOTAL	4	27	9	8	0	0	0	0	0	0	
	PERCENT	8	55	18	16	0	0	0	0	0	0	

											*	
M 51	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	14	2	6	3	0	0	0	0	0	25
	LOWER	1	8	7	8	0	0	0	0	0	0	24
	TOTAL	1	22	9	14	3	0	0	0	0	0	
	PERCENT	2	44	18	28	6	0	0	0	0	0	

											*	
M 52	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	1	3	17	4	0	0	0	0	0	25
	LOWER	0	2	2	15	5	0	0	0	0	0	24
	TOTAL	0	3	5	32	9	0	0	0	0	0	
	PERCENT	0	6	10	65	18	0	0	0	0	0	

											*	
M 53	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	14	11	0	0	0	0	0	25
	LOWER	0	2	1	18	3	0	0	0	0	0	24
	TOTAL	0	2	1	32	14	0	0	0	0	0	
	PERCENT	0	4	2	65	28	0	0	0	0	0	

											*	
M 54	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	6	19	0	0	0	0	0	25
	LOWER	0	0	0	8	16	0	0	0	0	0	24
	TOTAL	0	0	0	14	35	0	0	0	0	0	
	PERCENT	0	0	0	28	71	0	0	0	0	0	

											*	
M 55	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	2	0	8	15	0	0	0	0	0	25
	LOWER	0	1	0	13	10	0	0	0	0	0	24
	TOTAL	0	3	0	21	25	0	0	0	0	0	
	PERCENT	0	6	0	42	51	0	0	0	0	0	

											*	
M 56	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	8	13	1	3	0	0	0	0	0	0	25
	LOWER	6	16	1	1	0	0	0	0	0	0	24
	TOTAL	14	29	2	4	0	0	0	0	0	0	
	PERCENT	28	59	4	8	0	0	0	0	0	0	

											*	
M 57	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	2	15	8	0	0	0	0	0	25
	LOWER	0	0	1	19	4	0	0	0	0	0	24
	TOTAL	0	0	3	34	12	0	0	0	0	0	
	PERCENT	0	0	6	69	24	0	0	0	0	0	

											*	
M 58	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	15	10	0	0	0	0	0	25
	LOWER	0	0	2	16	6	0	0	0	0	0	24
	TOTAL	0	0	2	31	16	0	0	0	0	0	
	PERCENT	0	0	4	63	32	0	0	0	0	0	

											*	
M 59	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	2	13	10	0	0	0	0	0	25
	LOWER	0	0	1	18	4	0	0	0	0	0	24
	TOTAL	0	1	3	31	14	0	0	0	0	0	
	PERCENT	0	2	6	63	28	0	0	0	0	0	

											*	
M 60	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	2	1	11	11	0	0	0	0	0	25
	LOWER	0	0	1	18	5	0	0	0	0	0	24
	TOTAL	0	2	2	29	16	0	0	0	0	0	
	PERCENT	0	4	4	59	32	0	0	0	0	0	

											*	
M 61	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	3	16	2	2	2	0	0	0	0	0	25
	LOWER	5	13	1	4	1	0	0	0	0	0	24
	TOTAL	8	29	3	6	3	0	0	0	0	0	
	PERCENT	16	59	6	12	6	0	0	0	0	0	

											*	
M 62	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	13	10	1	0	1	0	0	0	0	0	25
	LOWER	9	15	0	0	0	0	0	0	0	0	24
	TOTAL	22	25	1	0	1	0	0	0	0	0	
	PERCENT	44	51	2	0	2	0	0	0	0	0	

											*	
M 63	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	8	16	1	0	0	0	0	0	0	0	25
	LOWER	8	14	0	2	0	0	0	0	0	0	24
	TOTAL	16	30	1	2	0	0	0	0	0	0	
	PERCENT	32	61	2	4	0	0	0	0	0	0	

											*	
M 64	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	12	13	0	0	0	0	0	0	0	0	25
	LOWER	6	17	0	0	0	0	0	0	0	1	24
	TOTAL	18	30	0	0	0	0	0	0	0	1	
	PERCENT	36	61	0	0	0	0	0	0	0	2	

											*	
M 65	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	19	6	0	0	0	0	0	0	0	0	25
	LOWER	14	9	0	0	0	0	0	0	0	1	24
	TOTAL	33	15	0	0	0	0	0	0	0	1	
	PERCENT	67	30	0	0	0	0	0	0	0	2	

											*	
M 66	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	2	16	1	6	0	0	0	0	0	0	25
	LOWER	3	13	4	3	0	0	0	0	0	1	24
	TOTAL	5	29	5	9	0	0	0	0	0	1	
	PERCENT	10	59	10	18	0	0	0	0	0	2	

											*	
M 67	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	1	13	2	9	0	0	0	0	0	0	25
	LOWER	3	15	2	3	0	0	0	0	0	1	24
	TOTAL	4	28	4	12	0	0	0	0	0	1	
	PERCENT	8	57	8	24	0	0	0	0	0	2	

											*	
M 68	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	18	6	0	0	0	0	0	0	0	0	24
	LOWER	13	11	0	0	0	0	0	0	0	0	24
	TOTAL	31	17	0	0	0	0	0	0	0	0	
	PERCENT	64	35	0	0	0	0	0	0	0	0	

											*	
M 69	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	4	2	14	4	0	0	0	0	0	24
	LOWER	3	3	2	14	2	0	0	0	0	0	24
	TOTAL	3	7	4	28	6	0	0	0	0	0	
	PERCENT	6	14	8	58	12	0	0	0	0	0	

											*	
M 70	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	7	3	9	5	0	0	0	0	0	24
	LOWER	0	4	5	11	4	0	0	0	0	0	24
	TOTAL	0	11	8	20	9	0	0	0	0	0	
	PERCENT	0	22	16	41	18	0	0	0	0	0	

											*	
M 71	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	3	14	3	4	0	0	0	0	0	0	24
	LOWER	1	14	4	5	0	0	0	0	0	0	24
	TOTAL	4	28	7	9	0	0	0	0	0	0	
	PERCENT	8	58	14	18	0	0	0	0	0	0	

											*	
M 72	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	9	13	1	1	0	0	0	0	0	0	24
	LOWER	4	17	2	1	0	0	0	0	0	0	24
	TOTAL	13	30	3	2	0	0	0	0	0	0	
	PERCENT	27	62	6	4	0	0	0	0	0	0	

371 177

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
INSTITUTE EVALUATION FORM NO. 1 POSTTEST
PAGE 15.

M 73 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	4	0	11	8	0	0	0	0	0	24
LOWER	0	2	3	13	6	0	0	0	0	0	24
TOTAL	1	6	3	24	14	0	0	0	0	0	
PERCENT	2	12	6	50	29	0	0	0	0	0	

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MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
INSTITUTE EVALUATION FORM NUMBER II AUGUST 1970

MEAN AND SD FOR PART I = 63.70, 7.44

MEAN AND SD FOR PART II = 59.91, 8.20

MEAN AND SD FOR TOTAL = 123.62, 14.83

PEARSON R PART I X PART II = 0.782
KR21 RELIABILITY ESTIMATE = ******
NUMBER OF SUBJECTS = 48
UNCORRECTED ODD EVEN REL = 0.867
CORRECTED ODD EVEN REL = 0.928
STANDARD ERROR ESTIMATE = 3.959

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
201	149	1.71	75	1.51	74	1.71
202	145	1.44	76	1.65	69	1.10
203	126	0.16	64	0.03	62	0.25
204	128	0.29	66	0.30	62	0.25
205	127	0.22	64	0.03	63	0.37
206	134	0.69	67	0.44	67	0.86
207	115	-0.58	56	-1.03	59	-0.11
208	112	-0.78	63	-0.09	49	-1.33
209	120	-0.24	66	0.30	54	-0.72
210	149	1.71	77	1.78	72	1.47
211	132	0.56	67	0.44	65	0.61
212	99	-1.65	52	-1.57	47	-1.57
213	118	-0.37	59	-0.63	59	-0.11
214	98	-1.72	51	-1.70	47	-1.57
215	122	-0.10	56	-1.03	66	0.74
216	132	0.56	68	0.57	64	0.49
217	131	0.49	70	0.84	61	0.13
218	145	1.44	72	1.11	73	1.59
219	109	-0.98	58	-0.76	51	-1.08
220	124	0.02	64	0.03	60	0.01
221	129	0.36	65	0.17	64	0.49
222	115	-0.58	63	-0.09	52	-0.96
223	126	0.16	67	0.44	59	-0.11
224	102	-1.45	53	-1.43	49	-1.33
225	101	-1.52	53	-1.43	48	-1.45
226	126	0.16	62	-0.22	64	0.49
227	129	0.36	66	0.30	63	0.37
228	107	-1.12	58	-0.76	49	-1.33
229	128	0.29	66	0.30	62	0.25
230	119	-0.31	65	0.17	54	-0.72

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
INSTITUTE EVALUATION FORM NUMBER II AUGUST 1970

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
231	126	0.16	68	0.57	58	-0.23
232	118	-0.37	58	-0.76	60	0.01
233	107	-1.12	60	-0.49	47	-1.57
234	127	0.22	59	-0.63	68	0.98
235	116	-0.51	60	-0.49	56	-0.47
236	114	-0.64	56	-1.03	58	-0.23
237	125	0.09	63	-0.09	62	0.25
238	121	-0.17	64	0.03	57	-0.35
239	136	0.83	74	1.38	62	0.25
240	153	1.97	78	1.92	75	1.83
241	132	0.56	68	0.57	64	0.49
242	121	-0.17	62	-0.22	59	-0.11
243	123	-0.04	63	-0.09	60	0.01
244	116	-0.51	60	-0.49	56	-0.47
245	141	1.17	72	1.11	69	1.10
247	80	-2.94	42	-2.91	38	-2.67
248	130	0.42	65	0.17	65	0.61
249	151	1.84	77	1.78	74	1.71

										*	
1 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	3	17	1	3	0	0	0	0	0	0	24
LOWER	5	14	2	3	0	0	0	0	0	0	24
TOTAL	8	31	3	6	0	0	0	0	0	0	
PERCENT	16	64	6	12	0	0	0	0	0	0	

										*	
2 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	0	3	0	17	4	0	0	0	0	0	24
LOWER	0	2	3	12	7	0	0	0	0	0	24
TOTAL	0	5	3	29	11	0	0	0	0	0	
PERCENT	0	10	6	60	22	0	0	0	0	0	

										*	
3 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	3	12	1	8	0	0	0	0	0	0	24
LOWER	2	12	6	4	0	0	0	0	0	0	24
TOTAL	5	24	7	12	0	0	0	0	0	0	
PERCENT	10	50	14	25	0	0	0	0	0	0	

										*	
4 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	4	13	3	4	0	0	0	0	0	0	24
LOWER	3	12	7	2	0	0	0	0	0	0	24
TOTAL	7	25	10	6	0	0	0	0	0	0	
PERCENT	14	52	20	12	0	0	0	0	0	0	

										*	
5 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	0	2	0	20	2	0	0	0	0	0	24
LOWER	1	4	2	14	3	0	0	0	0	0	24
TOTAL	1	6	2	34	5	0	0	0	0	0	
PERCENT	2	12	4	70	10	0	0	0	0	0	

										*	
6 OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
UPPER	0	0	0	14	10	0	0	0	0	0	24
LOWER	0	1	0	15	8	0	0	0	0	0	24
TOTAL	0	1	0	29	18	0	0	0	0	0	
PERCENT	0	2	0	60	37	0	0	0	0	0	

7 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	10	13	1	0	0	0	0	0	0	0	24
LOWER	3	20	0	1	0	0	0	0	0	0	24
TOTAL	13	33	1	1	0	0	0	0	0	0	
PERCENT	27	68	2	2	0	0	0	0	0	0	

8 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	1	12	11	0	0	0	0	0	24
LOWER	0	1	1	15	7	0	0	0	0	0	24
TOTAL	0	1	2	27	18	0	0	0	0	0	
PERCENT	0	2	4	56	37	0	0	0	0	0	

9 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	3	16	3	2	0	0	0	0	0	0	24
LOWER	2	19	1	2	0	0	0	0	0	0	24
TOTAL	5	35	4	4	0	0	0	0	0	0	
PERCENT	10	72	8	8	0	0	0	0	0	0	

10 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	2	0	16	6	0	0	0	0	0	24
LOWER	0	1	0	16	7	0	0	0	0	0	24
TOTAL	0	3	0	32	13	0	0	0	0	0	
PERCENT	0	6	0	66	27	0	0	0	0	0	

11 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	7	16	1	0	0	0	0	0	0	0	24
LOWER	3	16	5	0	0	0	0	0	0	0	24
TOTAL	10	32	6	0	0	0	0	0	0	0	
PERCENT	20	66	12	0	0	0	0	0	0	0	

12 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	11	2	5	0	0	0	0	0	0	24
LOWER	3	19	1	1	0	0	0	0	0	0	24
TOTAL	9	30	3	6	0	0	0	0	0	0	
PERCENT	18	62	6	12	0	0	0	0	0	0	

13 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	7	16	1	0	0	0	0	0	0	0	24
LOWER	5	18	1	0	0	0	0	0	0	0	24
TOTAL	12	34	2	0	0	0	0	0	0	0	
PERCENT	25	70	4	0	0	0	0	0	0	0	

14 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	11	10	1	2	0	0	0	0	0	0	24
LOWER	12	12	0	0	0	0	0	0	0	0	24
TOTAL	23	22	1	2	0	0	0	0	0	0	
PERCENT	47	45	2	4	0	0	0	0	0	0	

15 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	10	8	2	2	2	0	0	0	0	0	24
LOWER	10	10	0	3	0	0	0	0	0	0	24
TOTAL	20	18	2	5	2	0	0	0	0	0	
PERCENT	41	37	4	10	4	0	0	0	0	0	

16 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	3	4	12	5	0	0	0	0	0	24
LOWER	0	6	0	12	5	0	0	0	0	1	24
TOTAL	0	9	4	24	10	0	0	0	0	1	
PERCENT	0	18	8	50	20	0	0	0	0	2	

17 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	14	3	3	0	0	0	0	0	0	24
LOWER	3	15	4	2	0	0	0	0	0	0	24
TOTAL	7	29	7	5	0	0	0	0	0	0	
PERCENT	14	60	14	10	0	0	0	0	0	0	

18 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	2	3	16	3	0	0	0	0	0	24
LOWER	1	4	2	15	2	0	0	0	0	0	24
TOTAL	1	6	5	31	5	0	0	0	0	0	
PERCENT	2	12	10	64	10	0	0	0	0	0	

											*	
19	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	5	12	3	3	1	0	0	0	0	0	24
	LOWER	7	14	2	1	0	0	0	0	0	0	24
	TOTAL	12	26	5	4	1	0	0	0	0	0	
	PERCENT	25	54	10	8	2	0	0	0	0	0	

											*	
20	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	2	1	14	7	0	0	0	0	0	24
	LOWER	1	4	1	15	3	0	0	0	0	0	24
	TOTAL	1	6	2	29	10	0	0	0	0	0	
	PERCENT	2	12	4	60	20	0	0	0	0	0	

											*	
21	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	0	0	0	14	10	0	0	0	0	0	24
	LOWER	0	2	0	13	9	0	0	0	0	0	24
	TOTAL	0	2	0	27	19	0	0	0	0	0	
	PERCENT	0	4	0	56	39	0	0	0	0	0	

											*	
22	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	8	14	2	0	0	0	0	0	0	0	24
	LOWER	7	14	1	2	0	0	0	0	0	0	24
	TOTAL	15	28	3	2	0	0	0	0	0	0	
	PERCENT	31	58	6	4	0	0	0	0	0	0	

											*	
23	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	13	8	3	0	0	0	0	0	0	0	24
	LOWER	8	15	1	0	0	0	0	0	0	0	24
	TOTAL	21	23	4	0	0	0	0	0	0	0	
	PERCENT	43	47	8	0	0	0	0	0	0	0	

											*	
24	OPTIONS =	1	2	3	4	5	6	7	8	9	OMIT	TOTAL
	UPPER	6	12	3	2	1	0	0	0	0	0	24
	LOWER	6	14	2	2	0	0	0	0	0	0	24
	TOTAL	12	26	5	4	1	0	0	0	0	0	
	PERCENT	25	54	10	8	2	0	0	0	0	0	

25 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	19	3	0	0	0	0	0	0	0	24
LOWER	3	19	2	0	0	0	0	0	0	0	24
TOTAL	5	38	5	0	0	0	0	0	0	0	
PERCENT	10	79	10	0	0	0	0	0	0	0	

26 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	2	6	13	3	0	0	0	0	0	24
LOWER	1	4	1	15	3	0	0	0	0	0	24
TOTAL	1	6	7	28	6	0	0	0	0	0	
PERCENT	2	12	14	58	12	0	0	0	0	0	

27 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	0	1	14	8	0	0	0	0	0	24
LOWER	0	0	1	16	7	0	0	0	0	0	24
TOTAL	1	0	2	30	15	0	0	0	0	0	
PERCENT	2	0	4	62	31	0	0	0	0	0	

28 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	16	2	2	0	0	0	0	0	0	24
LOWER	3	17	3	1	0	0	0	0	0	0	24
TOTAL	7	33	5	3	0	0	0	0	0	0	
PERCENT	14	68	10	6	0	0	0	0	0	0	

29 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	13	9	2	0	0	0	0	0	0	0	24
LOWER	11	10	1	2	0	0	0	0	0	0	24
TOTAL	24	19	3	2	0	0	0	0	0	0	
PERCENT	50	39	6	4	0	0	0	0	0	0	

30 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	13	9	1	0	0	0	0	0	0	1	24
LOWER	11	11	2	0	0	0	0	0	0	0	24
TOTAL	24	20	3	0	0	0	0	0	0	1	
PERCENT	50	41	6	0	0	0	0	0	0	2	

31 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	20	1	3	0	0	0	0	0	0	0	24
LOWER	21	0	3	0	0	0	0	0	0	0	24
TOTAL	41	1	6	0	0	0	0	0	0	0	
PERCENT	85	2	12	0	0	0	0	0	0	0	

32 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	22	0	2	0	0	0	0	0	0	0	24
LOWER	21	0	3	0	0	0	0	0	0	0	24
TOTAL	43	0	5	0	0	0	0	0	0	0	
PERCENT	89	0	10	0	0	0	0	0	0	0	

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MEAN AND SD FOR PART I = 191.51, 9.67

MEAN AND SD FOR PART II = 82.58, 12.13

MEAN AND SD FOR TOTAL = 274.09, 17.79

PEARSON R PART I X PART II = 0.319
KR21 RELIABILITY ESTIMATE = ******
NUMBER OF SUBJECTS = 98
UNCORRECTED ODD EVEN REL = 0.694
CORRECTED ODD EVEN REL = 0.819
STANDARD ERROR ESTIMATE = 7.557

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
0011	278	0.21	191	-0.05	87	0.36
0021	297	1.28	206	1.49	91	0.69
0031	274	-0.00	193	0.15	81	-0.13
0040	280	0.33	195	0.36	85	0.19
0051	259	-0.84	177	-1.49	82	-0.04
0061	281	0.38	195	0.36	86	0.28
0071	290	0.89	203	1.18	87	0.36
0081	258	-0.90	179	-1.29	79	-0.29
0091	286	0.66	196	0.46	90	0.61
0101	300	1.45	208	1.70	92	0.77
0111	279	0.27	190	-0.15	89	0.52
0121	255	-1.07	173	-1.91	82	-0.04
0131	268	-0.34	186	-0.56	82	-0.04
0141	293	1.06	205	1.39	88	0.44
0151	282	0.44	194	0.25	88	0.44
0161	273	-0.06	190	-0.15	83	0.03
0171	269	-0.28	188	-0.36	81	-0.13
0181	295	1.17	201	0.98	94	0.94
0191	281	0.38	194	0.25	87	0.36
0201	276	0.10	188	-0.36	88	0.44
0211	285	0.61	194	0.25	91	0.69
0221	279	0.27	192	0.05	87	0.36
0231	259	-0.84	177	-1.49	82	-0.04
0241	252	-1.24	176	-1.60	76	-0.54
0251	267	-0.39	188	-0.36	79	-0.29
0261	253	-1.18	178	-1.39	75	-0.62
0271	278	0.21	194	0.25	84	0.11
0281	263	-0.62	183	-0.87	80	-0.21
0291	286	0.66	186	-0.56	100	1.43
0301	268	-0.34	184	-0.77	84	0.11

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IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
0311	257	-0.96	178	-1.39	79	-0.29
0321	261	-0.73	176	-1.60	85	0.19
0331	241	-1.85	187	-0.46	54	-2.35
0341	272	-0.11	188	-0.36	84	0.11
0351	282	0.44	194	0.25	88	0.44
0361	285	0.61	195	0.36	90	0.61
0371	271	-0.17	189	-0.25	82	-0.04
0381	250	-1.35	176	-1.60	74	-0.70
0391	271	-0.17	193	0.15	78	-0.37
0401	235	-2.19	189	-0.25	46	-3.01
0411	284	0.55	197	0.56	87	0.36
0421	266	-0.45	182	-0.98	84	0.11
0431	272	-0.11	189	-0.25	83	0.03
0441	238	-2.02	193	0.15	45	-3.09
0451	232	-2.36	188	-0.36	44	-3.18
0461	228	-2.58	192	0.05	36	-3.83
0471	275	0.05	189	-0.25	86	0.28
0481	235	-2.19	192	0.05	43	-3.26
0491	291	0.95	203	1.18	88	0.44
0012	296	1.23	203	1.18	93	0.85
0022	309	1.96	211	2.01	98	1.27
0032	279	0.27	189	-0.25	90	0.61
0042	282	0.44	194	0.25	88	0.44
0052	277	0.16	189	-0.25	88	0.44
0062	274	-0.00	190	-0.15	84	0.11
0072	285	0.61	194	0.25	91	0.69
0082	287	0.72	192	0.05	95	1.02
0092	263	-0.62	183	-0.87	80	-0.21
0102	306	1.79	210	1.91	96	1.10
0112	285	0.61	199	0.77	86	0.28
0122	261	-0.73	185	-0.67	76	-0.54
0132	272	-0.11	190	-0.15	82	-0.04
0142	304	1.68	213	2.22	91	0.69
0152	287	0.72	197	0.56	90	0.61
0162	275	0.05	191	-0.05	84	0.11
0172	314	2.24	221	3.04	93	0.85
0182	307	1.84	209	1.80	98	1.27
0192	269	-0.28	189	-0.25	80	-0.21
0202	272	-0.11	190	-0.15	82	-0.04
0212	293	1.06	202	1.08	91	0.69
0222	264	-0.56	182	-0.98	82	-0.04
0232	263	-0.62	179	-1.29	84	0.11
0242	256	-1.01	182	-0.98	74	-0.70
0252	265	-0.51	189	-0.25	76	-0.54
0262	254	-1.12	177	-1.49	77	-0.46

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IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
0272	293	1.06	203	1.18	90	0.61
0282	265	-0.51	180	-1.18	85	0.19
0292	283	0.50	190	-0.15	93	0.85
0302	267	-0.39	183	-0.87	84	0.11
0312	259	-0.84	176	-1.60	83	0.03
0322	271	-0.17	190	-0.15	81	-0.13
0332	279	0.27	188	-0.36	91	0.69
0342	289	0.83	196	0.46	93	0.85
0352	289	0.83	201	0.98	88	0.44
0362	282	0.44	192	0.05	90	0.61
0372	281	0.38	193	0.15	88	0.44
0382	273	-0.06	194	0.25	79	-0.29
0392	264	-0.56	183	-0.87	81	-0.13
0402	304	1.68	212	2.11	92	0.77
0412	285	0.61	194	0.25	91	0.69
0422	264	-0.56	182	-0.98	82	-0.04
0432	268	-0.34	186	-0.56	82	-0.04
0442	270	-0.22	183	-0.87	87	0.36
0452	277	0.16	195	0.36	82	-0.04
0462	277	0.16	201	0.98	76	-0.54
0472	279	0.27	200	0.87	79	-0.29
0482	228	-2.58	187	-0.46	41	-3.42
0492	305	1.73	215	2.42	90	0.61

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1 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	34	14	0	1	0	0	0	0	0	0	49
LOWER	27	21	1	0	0	0	0	0	0	0	49
TOTAL	61	35	1	1	0	0	0	0	0	0	
PERCENT	62	35	1	1	0	0	0	0	0	0	

2 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	3	2	21	22	0	0	0	0	0	49
LOWER	0	1	2	26	20	0	0	0	0	0	49
TOTAL	1	4	4	47	42	0	0	0	0	0	
PERCENT	1	4	4	47	42	0	0	0	0	0	

3 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	28	19	2	0	0	0	0	0	0	0	49
LOWER	29	20	0	0	0	0	0	0	0	0	49
TOTAL	57	39	2	0	0	0	0	0	0	0	
PERCENT	58	39	2	0	0	0	0	0	0	0	

4 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	31	14	1	0	3	0	0	0	0	0	49
LOWER	27	18	0	1	3	0	0	0	0	0	49
TOTAL	58	32	1	1	6	0	0	0	0	0	
PERCENT	59	32	1	1	6	0	0	0	0	0	

5 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	5	5	28	10	0	0	0	0	0	49
LOWER	0	5	6	28	10	0	0	0	0	0	49
TOTAL	1	10	11	56	20	0	0	0	0	0	
PERCENT	1	10	11	57	20	0	0	0	0	0	

6 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	1	12	35	0	0	0	0	0	49
LOWER	0	0	0	16	33	0	0	0	0	0	49
TOTAL	0	1	1	28	68	0	0	0	0	0	
PERCENT	0	1	1	28	69	0	0	0	0	0	

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7 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	7	42	0	0	0	0	0	49
LOWER	1	0	0	10	38	0	0	0	0	0	49
TOTAL	1	0	0	17	80	0	0	0	0	0	
PERCENT	1	0	0	17	81	0	0	0	0	0	

8 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	6	6	23	12	0	0	0	0	0	49
LOWER	0	6	8	23	12	0	0	0	0	0	49
TOTAL	1	12	14	46	25	0	0	0	0	0	
PERCENT	1	12	14	46	25	0	0	0	0	0	

9 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	2	1	24	21	0	0	0	0	0	49
LOWER	0	0	1	20	28	0	0	0	0	0	49
TOTAL	1	2	2	44	49	0	0	0	0	0	
PERCENT	1	2	2	44	50	0	0	0	0	0	

10 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	4	3	21	18	0	0	0	0	1	49
LOWER	2	1	6	24	16	0	0	0	0	0	49
TOTAL	4	5	9	45	34	0	0	0	0	1	
PERCENT	4	5	9	45	34	0	0	0	0	1	

11 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	22	25	1	1	0	0	0	0	0	0	49
LOWER	26	21	1	1	0	0	0	0	0	0	49
TOTAL	48	46	2	2	0	0	0	0	0	0	
PERCENT	48	46	2	2	0	0	0	0	0	0	

12 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	19	20	2	7	1	0	0	0	0	0	49
LOWER	22	17	4	4	2	0	0	0	0	0	49
TOTAL	41	37	6	11	3	0	0	0	0	0	
PERCENT	41	37	6	11	3	0	0	0	0	0	

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13 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	17	25	5	2	0	0	0	0	0	0	49
LOWER	20	22	7	0	0	0	0	0	0	0	49
TOTAL	37	47	12	2	0	0	0	0	0	0	
PERCENT	37	47	12	2	0	0	0	0	0	0	

14 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	11	30	5	2	1	0	0	0	0	0	49
LOWER	14	33	2	0	0	0	0	0	0	0	49
TOTAL	25	63	7	2	1	0	0	0	0	0	
PERCENT	25	64	7	2	1	0	0	0	0	0	

15 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	2	4	32	11	0	0	0	0	0	49
LOWER	0	1	4	38	6	0	0	0	0	0	49
TOTAL	0	3	8	70	17	0	0	0	0	0	
PERCENT	0	3	8	71	17	0	0	0	0	0	

16 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	14	21	10	4	0	0	0	0	0	0	49
LOWER	14	27	4	3	1	0	0	0	0	0	49
TOTAL	28	48	14	7	1	0	0	0	0	0	
PERCENT	28	48	14	7	1	0	0	0	0	0	

17 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	10	13	10	12	4	0	0	0	0	0	49
LOWER	7	15	11	14	2	0	0	0	0	0	49
TOTAL	17	28	21	26	6	0	0	0	0	0	
PERCENT	17	28	21	26	6	0	0	0	0	0	

18 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	3	29	16	0	0	0	0	0	49
LOWER	0	2	3	24	20	0	0	0	0	0	49
TOTAL	0	3	6	53	36	0	0	0	0	0	
PERCENT	0	3	6	54	36	0	0	0	0	0	

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19 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	9	30	5	5	0	0	0	0	0	0	49
LOWER	8	31	8	2	0	0	0	0	0	0	49
TOTAL	17	61	13	7	0	0	0	0	0	0	
PERCENT	17	62	13	7	0	0	0	0	0	0	

20 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	13	36	0	0	0	0	0	49
LOWER	0	0	0	11	38	0	0	0	0	0	49
TOTAL	0	0	0	24	74	0	0	0	0	0	
PERCENT	0	0	0	24	75	0	0	0	0	0	

21 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	22	21	1	5	0	0	0	0	0	0	49
LOWER	13	24	6	4	2	0	0	0	0	0	49
TOTAL	35	45	7	9	2	0	0	0	0	0	
PERCENT	35	45	7	9	2	0	0	0	0	0	

22 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	27	21	0	1	0	0	0	0	0	0	49
LOWER	26	22	0	1	0	0	0	0	0	0	49
TOTAL	53	43	0	2	0	0	0	0	0	0	
PERCENT	54	43	0	2	0	0	0	0	0	0	

23 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	5	2	31	10	0	0	0	0	0	49
LOWER	0	0	3	27	19	0	0	0	0	0	49
TOTAL	1	5	5	58	29	0	0	0	0	0	
PERCENT	1	5	5	59	29	0	0	0	0	0	

24 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	27	6	10	0	0	0	0	0	0	49
LOWER	7	29	8	5	0	0	0	0	0	0	49
TOTAL	13	56	14	15	0	0	0	0	0	0	
PERCENT	13	57	14	15	0	0	0	0	0	0	

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25 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	12	11	18	6	0	0	0	0	1	49
LOWER	3	12	17	15	2	0	0	0	0	0	49
TOTAL	4	24	28	33	8	0	0	0	0	1	
PERCENT	4	24	28	33	8	0	0	0	0	1	

26 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	24	18	1	0	0	0	0	0	0	49
LOWER	6	21	17	5	0	0	0	0	0	0	49
TOTAL	12	45	35	6	0	0	0	0	0	0	
PERCENT	12	45	35	6	0	0	0	0	0	0	

27 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	6	5	32	6	0	0	0	0	0	49
LOWER	0	4	10	23	12	0	0	0	0	0	49
TOTAL	0	10	15	55	18	0	0	0	0	0	
PERCENT	0	10	15	56	18	0	0	0	0	0	

28 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	18	5	18	8	0	0	0	0	0	49
LOWER	1	19	4	18	7	0	0	0	0	0	49
TOTAL	1	37	9	36	15	0	0	0	0	0	
PERCENT	1	37	9	36	15	0	0	0	0	0	

29 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	14	9	26	0	0	0	0	0	0	49
LOWER	0	13	12	23	1	0	0	0	0	0	49
TOTAL	0	27	21	49	1	0	0	0	0	0	
PERCENT	0	27	21	50	1	0	0	0	0	0	

30 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	14	26	4	4	1	0	0	0	0	0	49
LOWER	12	30	4	3	0	0	0	0	0	0	49
TOTAL	26	56	8	7	1	0	0	0	0	0	
PERCENT	26	57	8	7	1	0	0	0	0		

31 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	1	4	31	12	0	0	0	0	0	49
LOWER	0	0	8	29	12	0	0	0	0	0	49
TOTAL	1	1	12	60	24	0	0	0	0	0	
PERCENT	1	1	12	61	24	0	0	0	0	0	

32 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	7	32	9	0	1	0	0	0	0	0	49
LOWER	9	35	4	1	0	0	0	0	0	0	49
TOTAL	16	67	13	1	1	0	0	0	0	0	
PERCENT	16	68	13	1	1	0	0	0	0	0	

33 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	12	6	24	7	0	0	0	0	0	49
LOWER	0	2	8	31	8	0	0	0	0	0	49
TOTAL	0	14	14	55	15	0	0	0	0	0	
PERCENT	0	14	14	56	15	0	0	0	0	0	

34 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	12	17	17	2	0	0	0	0	0	49
LOWER	0	20	18	10	1	0	0	0	0	0	49
TOTAL	1	32	35	27	3	0	0	0	0	0	
PERCENT	1	32	35	27	3	0	0	0	0	0	

35 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	1	31	16	0	0	0	0	0	49
LOWER	0	0	1	33	15	0	0	0	0	0	49
TOTAL	0	1	2	64	31	0	0	0	0	0	
PERCENT	0	1	2	65	31	0	0	0	0	0	

36 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	6	8	30	5	0	0	0	0	0	49
LOWER	0	2	2	25	20	0	0	0	0	0	49
TOTAL	0	8	10	55	25	0	0	0	0	0	
PERCENT	0	8	10	56	25	0	0	0	0	0	

195

37 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	16	29	4	0	0	0	0	0	0	49
LOWER	0	23	20	6	0	0	0	0	0	0	49
TOTAL	0	39	49	10	0	0	0	0	0	0	
PERCENT	0	39	50	10	0	0	0	0	0	0	

38 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	0	2	37	9	0	0	0	0	0	49
LOWER	1	4	1	30	13	0	0	0	0	0	49
TOTAL	2	4	3	67	22	0	0	0	0	0	
PERCENT	2	4	3	68	22	0	0	0	0	0	

39 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	16	0	30	2	0	0	0	0	0	49
LOWER	0	16	2	26	5	0	0	0	0	0	49
TOTAL	1	32	2	56	7	0	0	0	0	0	
PERCENT	1	32	2	57	7	0	0	0	0	0	

40 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	28	10	7	0	0	0	0	0	0	49
LOWER	6	31	8	4	0	0	0	0	0	0	49
TOTAL	10	59	18	11	0	0	0	0	0	0	
PERCENT	10	60	18	11	0	0	0	0	0	0	

41 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	26	12	5	0	0	0	0	0	1	49
LOWER	7	26	11	5	0	0	0	0	0	0	49
TOTAL	12	52	23	10	0	0	0	0	0	1	
PERCENT	12	53	23	10	0	0	0	0	0	1	

42 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	3	36	7	3	0	0	0	0	0	0	49
LOWER	9	36	4	0	0	0	0	0	0	0	49
TOTAL	12	72	11	3	0	0	0	0	0	0	
PERCENT	12	73	11	3	0	0	0	0	0	0	

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MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
COMPARISON OF PRE POST FOR EACH ITEM FORM I UPPER = PRE/LOWER = POST
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43 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	0	27	21	0	0	0	0	0	49
LOWER	0	0	2	30	17	0	0	0	0	0	49
TOTAL	0	1	2	57	38	0	0	0	0	0	
PERCENT	0	1	2	58	38	0	0	0	0	0	

44 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	13	25	10	0	0	0	0	0	49
LOWER	0	1	9	33	6	0	0	0	0	0	49
TOTAL	0	2	22	58	16	0	0	0	0	0	
PERCENT	0	2	22	59	16	0	0	0	0	0	

45 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	3	7	30	9	0	0	0	0	0	49
LOWER	0	4	6	29	10	0	0	0	0	0	49
TOTAL	0	7	13	59	19	0	0	0	0	0	
PERCENT	0	7	13	60	19	0	0	0	0	0	

46 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	28	7	9	1	0	0	0	0	0	49
LOWER	3	21	12	12	1	0	0	0	0	0	49
TOTAL	7	49	19	21	2	0	0	0	0	0	
PERCENT	7	50	19	21	2	0	0	0	0	0	

47 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	10	32	6	0	0	0	0	0	49
LOWER	0	1	2	39	7	0	0	0	0	0	49
TOTAL	0	2	12	71	13	0	0	0	0	0	
PERCENT	0	2	12	72	13	0	0	0	0	0	

48 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	2	23	24	0	0	0	0	0	49
LOWER	0	1	1	25	22	0	0	0	0	0	49
TOTAL	0	1	3	48	46	0	0	0	0	0	
PERCENT	0	1	3	48	46	0	0	0	0	0	

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COMPARISON OF PRE POST FOR EACH ITEM FORM I UPPER = PRE/LOWER = POST
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49 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	4	1	27	17	0	0	0	0	0	49
LOWER	2	4	1	22	20	0	0	0	0	0	49
TOTAL	2	8	2	49	37	0	0	0	0	0	
PERCENT	2	8	2	50	37	0	0	0	0	0	

50 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	24	8	10	2	0	0	0	0	0	49
LOWER	4	27	9	8	0	0	0	0	0	1	49
TOTAL	9	51	17	18	2	0	0	0	0	1	
PERCENT	9	52	17	18	2	0	0	0	0	1	

51 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	19	11	15	2	0	0	0	0	0	49
LOWER	1	22	9	14	3	0	0	0	0	0	49
TOTAL	3	41	20	29	5	0	0	0	0	0	
PERCENT	3	41	20	29	5	0	0	0	0	0	

52 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	6	7	32	4	0	0	0	0	0	49
LOWER	0	3	5	32	9	0	0	0	0	0	49
TOTAL	0	9	12	64	13	0	0	0	0	0	
PERCENT	0	9	12	65	13	0	0	0	0	0	

53 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	2	2	32	13	0	0	0	0	0	49
LOWER	0	2	1	32	14	0	0	0	0	0	49
TOTAL	0	4	3	64	27	0	0	0	0	0	
PERCENT	0	4	3	65	27	0	0	0	0	0	

54 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	18	31	0	0	0	0	0	49
LOWER	0	0	0	14	35	0	0	0	0	0	49
TOTAL	0	0	0	32	66	0	0	0	0	0	
PERCENT	0	0	0	32	67	0	0	0	0	0	

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COMPARISON OF PRE POST FOR EACH ITEM FORM I UPPER = PRE/LOWER = POST
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55	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	0	3	5	26	15	0	0	0	0	0	49
	LOWER	0	3	0	21	25	0	0	0	0	0	49
	TOTAL	0	6	5	47	40	0	0	0	0	0	
	PERCENT	0	6	5	47	40	0	0	0	0	0	

56	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	10	33	3	1	2	0	0	0	0	0	49
	LOWER	14	29	2	4	0	0	0	0	0	0	49
	TOTAL	24	62	5	5	2	0	0	0	0	0	
	PERCENT	24	63	5	5	2	0	0	0	0	0	

57	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	1	1	9	32	6	0	0	0	0	0	49
	LOWER	0	0	3	34	12	0	0	0	0	0	49
	TOTAL	1	1	12	66	18	0	0	0	0	0	
	PERCENT	1	1	12	67	18	0	0	0	0	0	

58	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	0	2	5	32	10	0	0	0	0	0	49
	LOWER	0	0	2	31	16	0	0	0	0	0	49
	TOTAL	0	2	7	63	26	0	0	0	0	0	
	PERCENT	0	2	7	64	26	0	0	0	0	0	

59	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	0	1	3	34	11	0	0	0	0	0	49
	LOWER	0	1	3	31	14	0	0	0	0	0	49
	TOTAL	0	2	6	65	25	0	0	0	0	0	
	PERCENT	0	2	6	66	25	0	0	0	0	0	

60	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	0	1	2	30	16	0	0	0	0	0	49
	LOWER	0	2	2	29	16	0	0	0	0	0	49
	TOTAL	0	3	4	59	32	0	0	0	0	0	
	PERCENT	0	3	4	60	32	0	0	0	0	0	

61 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	9	26	6	7	1	0	0	0	0	0	49
LOWER	8	29	3	6	3	0	0	0	0	0	49
TOTAL	17	55	9	13	4	0	0	0	0	0	
PERCENT	17	56	9	13	4	0	0	0	0	0	

62 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	28	19	2	0	0	0	0	0	0	0	49
LOWER	22	25	1	0	1	0	0	0	0	0	49
TOTAL	50	44	3	0	1	0	0	0	0	0	
PERCENT	51	44	3	0	1	0	0	0	0	0	

63 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	18	28	2	0	1	0	0	0	0	0	49
LOWER	16	30	1	2	0	0	0	0	0	0	49
TOTAL	34	58	3	2	1	0	0	0	0	0	
PERCENT	34	59	3	2	1	0	0	0	0	0	

64 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	16	25	2	0	0	0	0	0	0	6	49
LOWER	18	30	0	0	0	0	0	0	0	1	49
TOTAL	34	55	2	0	0	0	0	0	0	7	
PERCENT	34	56	2	0	0	0	0	0	0	7	

65 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	34	9	0	0	0	0	0	0	0	6	49
LOWER	33	15	0	0	0	0	0	0	0	1	49
TOTAL	67	24	0	0	0	0	0	0	0	7	
PERCENT	68	24	0	0	0	0	0	0	0	7	

66 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	20	9	7	1	0	0	0	0	6	49
LOWER	5	29	5	9	0	0	0	0	0	1	49
TOTAL	11	49	14	16	1	0	0	0	0	7	
PERCENT	11	50	14	16	1	0	0	0	0	7	

67	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	11	19	5	8	0	0	0	0	0	6	49
	LOWER	4	28	4	12	0	0	0	0	0	1	49
	TOTAL	15	47	9	20	0	0	0	0	0	7	
	PERCENT	15	47	9	20	0	0	0	0	0	7	

68	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	30	16	0	0	0	0	0	0	0	0	46
	LOWER	28	17	0	0	0	0	0	0	0	0	45
	TOTAL	58	33	0	0	0	0	0	0	0	0	
	PERCENT	63	36	0	0	0	0	0	0	0	0	

69	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	5	7	2	25	7	0	0	0	0	0	46
	LOWER	3	7	4	26	5	0	0	0	0	0	45
	TOTAL	8	14	6	51	12	0	0	0	0	0	
	PERCENT	8	15	6	56	13	0	0	0	0	0	

70	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	1	5	5	25	10	0	0	0	0	0	46
	LOWER	0	10	8	19	8	0	0	0	0	0	45
	TOTAL	1	15	13	44	18	0	0	0	0	0	
	PERCENT	1	16	14	48	19	0	0	0	0	0	

71	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	4	28	4	10	0	0	0	0	0	0	46
	LOWER	3	26	7	9	0	0	0	0	0	0	45
	TOTAL	7	54	11	19	0	0	0	0	0	0	
	PERCENT	7	59	12	20	0	0	0	0	0	0	

72	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	10	23	7	6	0	0	0	0	0	0	46
	LOWER	11	29	3	2	0	0	0	0	0	0	45
	TOTAL	21	52	10	8	0	0	0	0	0	0	
	PERCENT	23	57	10	8	0	0	0	0	0	0	

73	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	3	6	7	18	12	0	0	0	0	0	46
	LOWER	1	6	3	23	12	0	0	0	0	0	45
	TOTAL	4	12	10	41	24	0	0	0	0	0	
	PERCENT	4	13	10	45	26	0	0	0	0	0	

APPENDIX K

FOLLOW-UP INSTRUMENT

202

Follow-up Evaluation — Proposed Questionnaire

Short-Term Vocational Education Multiple Institute
for Eastern Metropolitan Areas

State University College, Oswego, N.Y.

Name _____ Date _____

This questionnaire has two parts. Part I consists of a group of statements you are asked to react to and resembles the questionnaires you filled out while you were attending an Institute. Part II is addressed to some of the more specific topics and discussions covered by the institute.

Part I	Strongly Agree	Agree	Un-decided	Dis-agree	IX-1 Strongly Disagree
1. High school students should be encouraged to plan to go to college until they prove they are unable to succeed in the college preparatory courses..	SA	A	U	D	SD
2. Vocational education should be the last resort for high school students.....	SA	A	U	D	SD
3. The placement of vocational graduates can best be done through an outside agency such as employment security..	SA	A	U	D	SD
4. High school vocational guidance services should be coordinated with out of school youth and adult programs of vocational education.....	SA	A	U	D	SD
5. The academic requirements for graduation should take precedence over the vocational requirements.....	SA	A	U	D	SD
6. Academic preparation rather than vocational education and training is better for minority youth because of their difficulty in getting accepted by a union.	SA	A	U	D	SD

	Strongly Agree	Agree	Un-decided	Dis-agree	Strongly Disagree
7. Socio-economic and technological forces and factors operating in the world today have made vocational guidance and counseling almost impossible.....	SA	A	U	D	SD
8. Graduates of the skilled craft vocational education and training programs such as machinists, plumbers, carpenters, electricians, beauticians, are seldom unemployed.....	SA	A	U	D	SD
9. Vocational guidance services in metropolitan cities should be available not only during normal school hours but in the evening as well.....	SA	A	U	D	SD
10. Vocational guidance services in metropolitan cities should include counselors with facility in foreign languages representative of the people served.....	SA	A	U	D	SD
11. Good work habits and attitudes are essential to getting, holding and advancing in a job.....	SA	A	U	D	SD
12. The ratio of pupils to vocational counselors is such that only very limited guidance services can be provided.....	SA	A	U	D	SD
13. Placement and follow-up services are important to vocational education program evaluation.....	SA	A	U	D	SD
14. Vocational guidance has little value if the school system has limited vocational choices.....	SA	A	U	D	SD

	Strongly Agree	Agree	decided	Dis-agree	Strongly Disagree
15. Anyone can learn a skilled or technical occupation if he really wants to.....	SA	A	U	D	SD
16. A machine operator, such as a lathe hand, has a skilled job.....	SA	A	U	D	SD
17. Vocational educators should get more concerned over the youth who can only become semi-skilled workers because they are the ones most adversely affected by technology.....	SA	A	U	D	SD
18. The percentage of youth in metropolitan city school systems desiring vocational education is insignificant in comparison to the percentage of youth who desire college preparatory education.....	SA	A	U	D	SD
19. Vocational education should provide minority group youth with an avenue to success in the world of work.....	SA	A	U	D	SD
20. Vocational guidance should be done primarily by teachers..	SA	A	U	D	SD
21. Curriculum in vocational schools should be geared to local economic and job opportunities.....	SA	A	U	D	SD
22. Counselors should be prepared to be involved in placement and follow-through activities for all pupils.....	SA	A	U	D	SD
23. Vocational schools should develop programs for the hard core unemployed.....	SA	A	U	D	SD

	Strongly Agree	Agree	Un-decided	Dis-agree	Strongly Disagree
24. Vocational education represents a realistic program for many pupils from minority groups....	SA	A	U	D	SD
25. Vocational education represents a realistic program for many pupils from minority groups...	SA	A	U	D	SD

Part II

Answer each question by checking the appropriate blank or blanks.

26. Follow-through work adjustment programs
    ____1. have never been introduced in my district
    ____2. have been discussed, but never carried out in my district
    ____3. have been discussed and plans are now underway to introduce such a program

27. My district has instituted a program for counselors focused upon:
    ____1. placement of in-school pupils
    ____2. placement of secondary school drop outs
    ____3. placement of secondary school graduates

28. Counselors in my district have
    ____1. toured our local vocational school
    ____2. seen a slide (or other A.V.) presentation about our vocational school
    ____3. have shown very little real interest in learning about our vocational facility and program

29. District wide programs have been introduced to develop
    ____1. local media on employment opportunities
    ____2. local media on employment opportunities for minority group pupils
    ____3. local media on post secondary school training programs for high school graduates

30. Efforts are being made in our city to involve all facets of the community in curriculum and program development for our vocational school

____1. Yes
____2. No

Please describe how you are carrying out this activity.

APPENDIX L

ITEM ANALYSIS PROGRAM FOR EXAMS

WITH OPTIONAL SECTIONS FOLLOW-UP

COSOS

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MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
FOLLOW-UP PART 1 - POST/POST PART 2 - PRE
PAGE 1.

MEAN AND SD FOR PART I = 74.18, 5.03

MEAN AND SD FOR PART II = 71.00, 8.38

MEAN AND SD FOR TOTAL = 145.18, 11.76

PEARSON R PART I X PART II = 0.492
KR21 RELIABILITY ESTIMATE = ******
NUMBER OF SUBJECTS = 32
UNCORRECTED ODD EVEN REL = 0.641
CORRECTED ODD EVEN REL = 0.781
STANDARD ERROR ESTIMATE = 5.498

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
318	166	1.76	82	1.55	84	1.55
349	161	1.34	85	2.14	76	0.59
315	160	1.25	83	1.75	77	0.71
321	157	1.00	78	0.75	79	0.95
309	155	0.83	78	0.75	77	0.71
307	153	0.66	77	0.55	76	0.59
314	152	0.57	77	0.55	75	0.47
301	151	0.49	78	0.75	73	0.23
311	151	0.49	75	0.16	76	0.59
347	150	0.40	74	-0.03	76	0.59
322	149	0.32	74	-0.03	75	0.47
330	149	0.32	77	0.55	72	0.11
302	148	0.23	69	-1.03	79	0.95
308	148	0.23	81	1.35	67	-0.47
313	148	0.23	77	0.55	71	0.00
336	148	0.23	72	-0.43	76	0.59
341	148	0.23	74	-0.03	74	0.35
319	147	0.15	73	-0.23	74	0.35
306	146	0.06	73	-0.23	73	0.23
312	145	-0.01	73	-0.23	72	0.11
316	144	-0.10	72	-0.43	72	0.11
337	142	-0.27	72	-0.43	70	-0.11
323	141	-0.35	71	-0.63	70	-0.11
338	140	-0.44	77	0.55	63	-0.95
324	139	-0.52	73	-0.23	66	-0.59
325	138	-0.61	70	-0.83	68	-0.35
328	138	-0.61	70	-0.83	68	-0.35
343	138	-0.61	66	-1.62	72	0.11
331	136	-0.78	69	-1.03	67	-0.47
326	133	-1.03	68	-1.22	65	-0.71
333	124	-1.80	75	0.16	49	-2.62
348	101	-3.75	61	-2.62	40	-3.69

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
FOLLOW-UP PART I - POST/POST PART 2 - POST

MEAN AND SD FOR PART I 74.18, 5.03

MEAN AND SD FOR PART II = 72.50, 8.48

MEAN AND SD FOR TOTAL = 146.68, 12.18

PEARSON R PART I X PART II = 0.581
KR21 RELIABILITY ESTIMATE = ******
NUMBER OF SUBJECTS = 32
UNCORRECTED ODD EVEN REL = 0.604
CORRECTED ODD EVEN REL = 0.753
STANDARD ERROR ESTIMATE = 6.049

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
318	166	1.58	82	1.55	64	1.35
349	163	1.33	85	2.14	78	0.64
308	162	1.25	81	1.35	81	1.00
315	161	1.17	83	1.75	78	0.64
301	157	0.84	78	0.75	79	0.76
321	157	0.84	78	0.75	79	0.76
307	155	0.68	77	0.55	78	0.64
314	155	0.68	77	0.55	78	0.64
333	154	0.60	75	0.16	79	0.76
302	153	0.51	69	-1.03	84	1.35
341	153	0.51	74	-0.03	79	0.76
336	152	0.43	72	-0.43	80	0.88
313	149	0.18	77	0.55	72	-0.05
330	149	0.18	77	0.55	72	-0.05
311	147	0.02	75	0.16	72	-0.05
309	146	-0.05	78	0.75	68	-0.53
316	146	-0.05	72	-0.43	74	0.17
337	146	-0.05	72	-0.43	74	0.17
306	145	-0.13	73	-0.23	72	-0.05
323	145	-0.13	71	-0.63	74	0.17
322	144	-0.22	74	-0.03	70	-0.29
328	143	-0.30	70	-0.83	73	0.05
338	143	-0.30	77	0.55	66	-0.76
347	143	-0.30	74	-0.03	69	-0.41
319	141	-0.46	73	-0.23	68	-0.53
331	141	-0.46	69	-1.03	72	-0.05
324	138	-0.71	73	-0.23	65	-0.88
312	137	-0.79	73	-0.23	64	-1.00
343	136	-0.87	66	-1.62	70	-0.29
325	135	-0.95	70	-0.83	65	-0.88
326	133	-1.12	68	-1.22	65	-0.88
348	99	-3.91	61	-2.62	38	-4.06

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COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
FOLLOW-UP POST/POST - UPPER PRE - LOWER
PAGE 1.

MEAN AND SD FOR PART I = 72.59, 7.04

MEAN AND SD FOR PART II = 0.00, 0.00

MEAN AND SD FOR TOTAL = 72.59, 7.04

PEARSON R PART I X PART II = 0.000
KR21 RELIABILITY ESTIMATE = ******
NUMBER OF SUBJECTS = 64
UNCORRECTED ODD EVEN REL = 0.606
CORRECTED ODD EVEN REL = 0.754
STANDARD ERROR ESTIMATE = 3.486

1 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	3	0	15	14	0	0	0	0	0	32
LOWER	0	1	2	20	9	0	0	0	0	0	32
TOTAL	0	4	2	35	23	0	0	0	0	0	
PERCENT	0	6	3	54	35	0	0	0	0	0	

2 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	7	25	0	0	0	0	0	32
LOWER	0	0	0	13	19	0	0	0	0	0	32
TOTAL	0	0	0	20	44	0	0	0	0	0	
PERCENT	0	0	0	31	68	0	0	0	0	0	

3 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	2	17	13	0	0	0	0	0	32
LOWER	0	2	2	14	14	0	0	0	0	0	32
TOTAL	0	2	4	31	27	0	0	0	0	0	
PERCENT	0	3	6	48	42	0	0	0	0	0	

4 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	11	20	1	0	0	0	0	0	0	0	32
LOWER	7	21	2	0	0	0	0	0	0	0	32
TOTAL	18	41	3	0	0	0	0	0	0	0	
PERCENT	28	64	4	0	0	0	0	0	0	0	

5 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	5	14	12	0	0	0	0	0	32
LOWER	1	0	6	20	5	0	0	0	0	0	32
TOTAL	1	1	11	34	17	0	0	0	0	0	
PERCENT	1	1	17	53	26	0	0	0	0	0	

6 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	1	17	14	0	0	0	0	0	32
LOWER	0	1	4	19	8	0	0	0	0	0	32
TOTAL	0	1	5	36	22	0	0	0	0	0	
PERCENT	0	1	7	56	34	0	0	0	0	0	

7 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	2	3	14	13	0	0	0	0	0	32
LOWER	0	1	2	17	12	0	0	0	0	0	32
TOTAL	0	3	5	31	25	0	0	0	0	0	
PERCENT	0	4	7	48	39	0	0	0	0	0	

8 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	7	15	6	4	0	0	0	0	0	0	32
LOWER	8	14	5	4	1	0	0	0	0	0	32
TOTAL	15	29	11	8	1	0	0	0	0	0	
PERCENT	23	45	17	12	1	0	0	0	0	0	

9 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	17	15	0	0	0	0	0	0	0	0	32
LOWER	19	12	1	0	0	0	0	0	0	0	32
TOTAL	36	27	1	0	0	0	0	0	0	0	
PERCENT	56	42	1	0	0	0	0	0	0	0	

10 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	10	18	4	0	0	0	0	0	0	0	32
LOWER	12	18	1	0	1	0	0	0	0	0	32
TOTAL	22	36	5	0	1	0	0	0	0	0	
PERCENT	34	56	7	0	1	0	0	0	0	0	

11 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	20	12	0	0	0	0	0	0	0	0	32
LOWER	24	6	0	0	0	0	0	0	0	2	32
TOTAL	44	18	0	0	0	0	0	0	0	2	
PERCENT	68	28	0	0	0	0	0	0	0	3	

12 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	8	15	3	5	1	0	0	0	0	0	32
LOWER	9	12	5	4	0	0	0	0	0	2	32
TOTAL	17	27	8	9	1	0	0	0	0	2	
PERCENT	26	42	12	14	1	0	0	0	0	3	

13 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	22	10	0	0	0	0	0	0	0	0	32
LOWER	19	11	0	0	0	0	0	0	0	2	32
TOTAL	41	21	0	0	0	0	0	0	0	2	
PERCENT	64	32	0	0	0	0	0	0	0	3	

14 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	7	1	19	5	0	0	0	0	0	32
LOWER	4	4	2	15	5	0	0	0	0	2	32
TOTAL	4	11	3	34	10	0	0	0	0	2	
PERCENT	6	17	4	53	15	0	0	0	0	3	

15 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	4	4	22	2	0	0	0	0	0	32
LOWER	1	2	5	16	6	0	0	0	0	2	32
TOTAL	1	6	9	38	8	0	0	0	0	2	
PERCENT	1	9	14	59	12	0	0	0	0	3	

16 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	20	3	8	1	0	0	0	0	0	32
LOWER	1	20	2	7	0	0	0	0	0	2	32
TOTAL	1	40	5	15	1	0	0	0	0	2	
PERCENT	1	62	7	23	1	0	0	0	0	3	

17 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	14	7	5	0	0	0	0	0	0	32
LOWER	5	14	7	4	0	0	0	0	0	2	32
TOTAL	11	28	14	9	0	0	0	0	0	2	
PERCENT	17	43	21	14	0	0	0	0	0	3	

18 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	4	4	13	10	0	0	0	0	0	32
LOWER	3	5	3	11	8	0	0	0	0	2	32
TOTAL	4	9	7	24	18	0	0	0	0	2	
PERCENT	6	14	10	37	28	0	0	0	0	3	

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COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
FOLLOW-UP POST/POST - UPPER POST - LOWER
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MEAN AND SD FOR PART I = 73.34, 6.96

MEAN AND SD FOR PART II = 0.00, 0.00

MEAN AND SD FOR TOTAL = 73.34, 6.96

PEARSON R PART I X PART II = 0.000
KR21 RELIABILITY ESTIMATE = ******
NUMBER OF SUBJECTS = 64
UNCORRECTED ODD EVEN REL = 0.616
CORRECTED ODD EVEN REL = 0.762
STANDARD ERROR ESTIMATE = 3.394

1 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	3	0	15	14	0	0	0	0	0	32
LOWER	0	2	1	21	8	0	0	0	0	0	32
TOTAL	0	5	1	36	22	0	0	0	C	0	
PERCENT	0	7	1	56	34	0	0	0	0	0	

2 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	7	25	0	0	0	0	0	32
LOWER	0	0	0	8	24	0	0	0	0	0	32
TOTAL	0	0	0	15	49	0	0	0	0	0	
PERCENT	0	0	0	23	76	0	0	0	0	0	

3 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	2	17	13	0	0	0	0	0	32
LOWER	0	2	0	14	16	0	0	0	0	0	32
TOTAL	0	2	2	31	29	0	0	0	0	0	
PERCENT	0	3	3	48	45	0	0	0	0	0	

4 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	11	20	1	0	0	0	0	0	0	0	32
LOWER	9	18	2	3	0	0	0	0	0	0	32
TOTAL	20	38	3	3	0	0	0	0	0	0	
PERCENT	31	59	4	4	0	0	0	0	0	0	

5 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	5	14	12	0	0	0	0	0	32
LOWER	0	0	3	24	5	0	0	0	0	0	32
TOTAL	0	1	8	38	17	0	0	0	0	0	
PERCENT	0	1	12	59	26	0	0	0	0	0	

6 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	1	17	14	0	0	0	0	0	32
LOWER	0	0	1	22	9	0	0	0	0	0	32
TOTAL	0	0	2	39	23	0	0	0	0	0	
PERCENT	0	0	3	60	35	0	0	0	0	0	

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MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
FOLLOW-UP POST/POST - UPPER POST - LOWER
PAGE 3.

7 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	2	3	14	13	0	0	0	0	0	32
LOWER	0	1	2	16	13	0	0	0	0	0	32
TOTAL	0	3	5	30	26	0	0	0	0	0	
PERCENT	0	4	7	46	40	0	0	0	0	0	

8 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	7	15	6	4	0	0	0	0	0	0	32
LOWER	5	18	3	5	1	0	0	0	0	0	32
TOTAL	12	33	9	9	1	0	0	0	0	0	
PERCENT	18	51	14	14	1	0	0	0	0	0	

9 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	17	15	0	0	0	0	0	0	0	0	32
LOWER	15	15	1	0	1	0	0	0	0	0	32
TOTAL	32	30	1	0	1	0	0	0	0	0	
PERCENT	50	46	1	0	1	0	0	0	0	0	

10 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	10	18	4	0	0	0	0	0	0	0	32
LOWER	8	22	1	1	0	0	0	0	0	0	32
TOTAL	18	40	5	1	0	0	0	0	0	0	
PERCENT	28	62	7	1	0	0	0	0	0	0	

11 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	20	12	0	0	0	0	0	0	0	0	32
LOWER	20	11	0	0	0	0	0	0	0	1	32
TOTAL	40	23	0	0	0	0	0	0	0	1	
PERCENT	62	35	0	0	0	0	0	0	0	1	

12 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	8	15	3	5	1	0	0	0	0	0	32
LOWER	0	18	2	11	0	0	0	0	0	1	32
TOTAL	8	33	5	16	1	0	0	0	0	1	
PERCENT	12	51	7	25	1	0	0	0	0	1	

13 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	22	10	0	0	0	0	0	0	0	0	32
LOWER	21	10	0	0	0	0	0	0	0	1	32
TOTAL	43	20	0	0	0	0	0	0	0	1	
PERCENT	67	31	0	0	0	0	0	0	0	1	

14 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	7	1	19	5	0	0	0	0	0	32
LOWER	1	4	4	17	5	0	0	0	0	1	32
TOTAL	1	11	5	36	10	0	0	0	0	1	
PERCENT	1	17	7	56	15	0	0	0	0	1	

15 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	4	4	22	2	0	0	0	0	0	32
LOWER	0	6	5	12	8	0	0	0	0	1	32
TOTAL	0	10	9	34	10	0	0	0	0	1	
PERCENT	0	15	14	53	15	0	0	0	0	1	

16 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	20	3	8	1	0	0	0	0	0	32
LOWER	3	19	3	6	0	0	0	0	0	1	32
TOTAL	3	39	6	14	1	0	0	0	0	1	
PERCENT	4	60	9	21	1	0	0	0	0	1	

17 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	14	7	5	0	0	0	0	0	0	32
LOWER	8	18	3	2	0	0	0	0	0	1	32
TOTAL	14	32	10	7	0	0	0	0	0	1	
PERCENT	21	50	15	10	0	0	0	0	0	1	

18 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	1	4	4	13	10	0	0	0	0	0	32
LOWER	1	4	2	14	10	0	0	0	0	1	32
TOTAL	2	8	6	27	20	0	0	0	0	1	
PERCENT	3	12	9	42	31	0	0	0	0	1	

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
FOLLOW-UP FORM REVISED ITEMS 1-18 FROM IX SECTION OF FORM 1
PAGE 1.

MEAN AND SD FOR PART I = 102.75, 9.04

MEAN AND SD FOR PART II = 0.00, 0.00

MEAN AND SD FOR TOTAL = 102.75, 9.04

PEARSON R PART I X PART II = 0.000
KR21 RELIABILITY ESTIMATE = ******
NUMBER OF SUBJECTS = 33
UNCORRECTED ODD EVEN REL = 0.701
CORRECTED ODD EVEN REL = 0.824
STANDARD ERROR ESTIMATE = 3.790

IDENTIFICATION	TOTAL	Z SCORE	PART 1	Z SCORE	PART 2	Z SCORE
349	117	1.57				
318	116	1.46				
308	114	1.24				
315	113	1.13				
321	111	0.91				
309	109	0.68				
314	109	0.68				
307	108	0.57				
330	108	0.57				
338	108	0.57				
347	108	0.57				
311	106	0.35				
319	105	0.24				
341	105	0.24				
301	104	0.13				
313	104	0.13				
316	103	0.02				
324	103	0.02				
333	103	0.02				
312	101	-0.19				
323	100	-0.30				
344	100	-0.30				
336	99	-0.41				
337	99	-0.41				
322	98	-0.52				
326	98	-0.52				
328	98	-0.52				
331	97	-0.63				
302	96	-0.74				
306	96	-0.74				
325	96	-0.74				
343	93	-1.07				
348	66	-4.06				

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MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
FOLLOW-UP FORM REVISED ITEMS 1-18 FROM IX SECTION OF FORM 1
PAGE 2.

1 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	0	7	9	0	0	0	0	0	17
LOWER	0	2	0	9	5	0	0	0	0	0	16
TOTAL	0	3	0	16	14	0	0	0	0	0	
PERCENT	0	9	0	48	42	0	0	0	0	0	

2 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	2	15	0	0	0	0	0	17
LOWER	0	0	0	6	10	0	0	0	0	0	16
TOTAL	0	0	0	8	25	0	0	0	0	0	
PERCENT	0	0	0	24	75	0	0	0	0	0	

3 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	10	7	0	0	0	0	0	17
LOWER	0	1	2	7	6	0	0	0	0	0	16
TOTAL	0	1	2	17	13	0	0	0	0	0	
PERCENT	0	3	6	51	39	0	0	0	0	0	

4 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	10	1	0	0	0	0	0	0	0	17
LOWER	5	11	0	0	0	0	0	0	0	0	16
TOTAL	11	21	1	0	0	0	0	0	0	0	
PERCENT	33	63	3	0	0	0	0	0	0	0	

5 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	1	3	7	6	0	0	0	0	0	17
LOWER	0	0	2	8	6	0	0	0	0	0	16
TOTAL	0	1	5	15	12	0	0	0	0	0	
PERCENT	0	3	15	45	36	0	0	0	0	0	

6 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	9	8	0	0	0	0	0	17
LOWER	0	0	1	9	6	0	0	0	0	0	16
TOTAL	0	0	1	18	14	0	0	0	0	0	
PERCENT	0	0	3	54	42	0	0	0	0	0	

COMPUTER CENTER -- STATE UNIVERSITY COLLEGE AT OSWEGO
MUSTICO ITEM ANALYSIS PROGRAM FOR EXAMS WITH OPTIONAL SECTIONS
FOLLOW-UP FORM REVISED ITEMS 1-18 FROM IX SECTION OF FORM 1
PAGE 3.

7 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	1	6	10	0	0	0	0	0	17
LOWER	0	2	2	9	3	0	0	0	0	0	16
TOTAL	0	2	3	15	13	0	0	0	0	0	
PERCENT	0	6	9	45	39	0	0	0	0	0	

8 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	9	1	2	0	0	0	0	0	0	17
LOWER	2	7	5	2	0	0	0	0	0	0	16
TOTAL	7	16	6	4	0	0	0	0	0	0	
PERCENT	21	48	18	12	0	0	0	0	0	0	

9 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	11	6	0	0	0	0	0	0	0	0	17
LOWER	6	10	0	0	0	0	0	0	0	0	16
TOTAL	17	16	0	0	0	0	0	0	0	0	
PERCENT	51	48	0	0	0	0	0	0	0	0	

10 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	7	9	1	0	0	0	0	0	0	0	17
LOWER	3	10	3	0	0	0	0	0	0	0	16
TOTAL	10	19	4	0	0	0	0	0	0	0	
PERCENT	30	57	12	0	0	0	0	0	0	0	

11 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	13	4	0	0	0	0	0	0	0	0	17
LOWER	8	8	0	0	0	0	0	0	0	0	16
TOTAL	21	12	0	0	0	0	0	0	0	0	
PERCENT	63	36	0	0	0	0	0	0	0	0	

12 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	9	0	3	0	0	0	0	0	0	17
LOWER	4	6	3	2	1	0	0	0	0	0	16
TOTAL	9	15	3	5	1	0	0	0	0	0	
PERCENT	27	45	9	15	3	0	0	0	0	0	

13	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	15	2	0	0	0	0	0	0	0	0	17
	LOWER	8	8	0	0	0	0	0	0	0	0	16
	TOTAL	23	10	0	0	0	0	0	0	0	0	
	PERCENT	69	30	0	0	0	0	0	0	0	0	

14	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	0	3	0	11	3	0	0	0	0	0	17
	LOWER	0	4	2	8	2	0	0	0	0	0	16
	TOTAL	0	7	2	19	5	0	0	0	0	0	
	PERCENT	0	21	6	57	15	0	0	0	0	0	

15	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	0	3	0	14	0	0	0	0	0	0	17
	LOWER	0	1	4	9	2	0	0	0	0	0	16
	TOTAL	0	4	4	23	2	0	0	0	0	0	
	PERCENT	0	12	12	69	6	0	0	0	0	0	

16	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	0	9	2	5	1	0	0	0	0	0	17
	LOWER	0	11	2	3	0	0	0	0	0	0	16
	TOTAL	0	20	4	8	1	0	0	0	0	0	
	PERCENT	0	60	12	24	3	0	0	0	0	0	

17	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	4	8	2	3	0	0	0	0	0	0	17
	LOWER	2	7	5	2	0	0	0	0	0	0	16
	TOTAL	6	15	7	5	0	0	0	0	0	0	
	PERCENT	18	45	21	15	0	0	0	0	0	0	

18	OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
	UPPER	0	3	2	5	7	0	0	0	0	0	17
	LOWER	1	1	2	9	3	0	0	0	0	0	16
	TOTAL	1	4	4	14	10	0	0	0	0	0	
	PERCENT	3	12	12	42	30	0	0	0	0	0	

19 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	10	7	0	0	0	0	0	0	0	0	17
LOWER	6	10	0	0	0	0	0	0	0	0	16
TOTAL	16	17	0	0	0	0	0	0	0	0	
PERCENT	48	51	0	0	0	0	0	0	0	0	

20 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	5	1	7	4	0	0	0	0	0	17
LOWER	0	2	0	10	3	0	0	0	0	1	16
TOTAL	0	7	1	17	7	0	0	0	0	1	
PERCENT	0	21	3	51	21	0	0	0	0	3	

21 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	14	0	1	0	0	0	0	0	0	17
LOWER	1	12	0	2	0	0	0	0	0	1	16
TOTAL	3	26	0	3	0	0	0	0	0	1	
PERCENT	9	78	0	9	0	0	0	0	0	3	

22 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	10	6	0	1	0	0	0	0	0	0	17
LOWER	7	8	0	0	0	0	0	0	0	1	16
TOTAL	17	14	0	1	0	0	0	0	0	1	
PERCENT	51	42	0	3	0	0	0	0	0	3	

23 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	8	7	2	0	0	0	0	0	0	0	17
LOWER	4	10	1	0	0	0	0	0	0	1	16
TOTAL	12	17	3	0	0	0	0	0	0	1	
PERCENT	36	51	9	0	0	0	0	0	0	3	

24 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	0	0	0	9	8	0	0	0	0	0	17
LOWER	0	0	0	10	5	0	0	0	0	1	16
TOTAL	0	0	0	19	13	0	0	0	0	1	
PERCENT	0	0	0	57	39	0	0	0	0	3	

25 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	5	10	0	2	0	0	0	0	0	0	17
LOWER	4	10	1	0	0	0	0	0	0	1	16
TOTAL	9	20	1	2	0	0	0	0	0	1	
PERCENT	27	60	3	6	0	0	0	0	0	3	

26 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	2	5	7	0	0	0	0	0	0	3	17
LOWER	2	3	10	0	0	0	0	0	0	1	16
TOTAL	4	8	17	0	0	0	0	0	0	4	
PERCENT	12	24	51	0	0	0	0	0	0	12	

27 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	3	0	0	0	2	0	6	0	0	6	17
LOWER	1	1	3	1	3	0	6	0	0	1	16
TOTAL	4	1	3	1	5	0	12	0	0	7	
PERCENT	12	3	9	3	15	0	36	0	0	21	

28 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	6	0	0	7	1	0	1	0	0	2	17
LOWER	6	0	1	8	0	0	1	0	0	0	16
TOTAL	12	0	1	15	1	0	2	0	0	2	
PERCENT	36	0	3	45	3	0	6	0	0	6	

29 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	4	0	0	1	0	0	8	0	0	4	17
LOWER	2	1	2	0	2	2	5	0	0	2	16
TOTAL	6	1	2	1	2	2	13	0	0	6	
PERCENT	18	3	6	3	6	6	39	0	0	18	

30 OPTIONS =	1	2	3	4	5	6	7	8	9	* OMIT	TOTAL
UPPER	13	2	0	0	0	0	0	0	0	2	17
LOWER	12	3	0	0	0	0	0	0	0	1	16
TOTAL	25	5	0	0	0	0	0	0	0	3	
PERCENT	75	15	0	0	0	0	0	0	0	9	